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Puget Sound Atari News

The Pacific Northwest's International News Magazine
for the ATARI™ Computer User and Enthusiast

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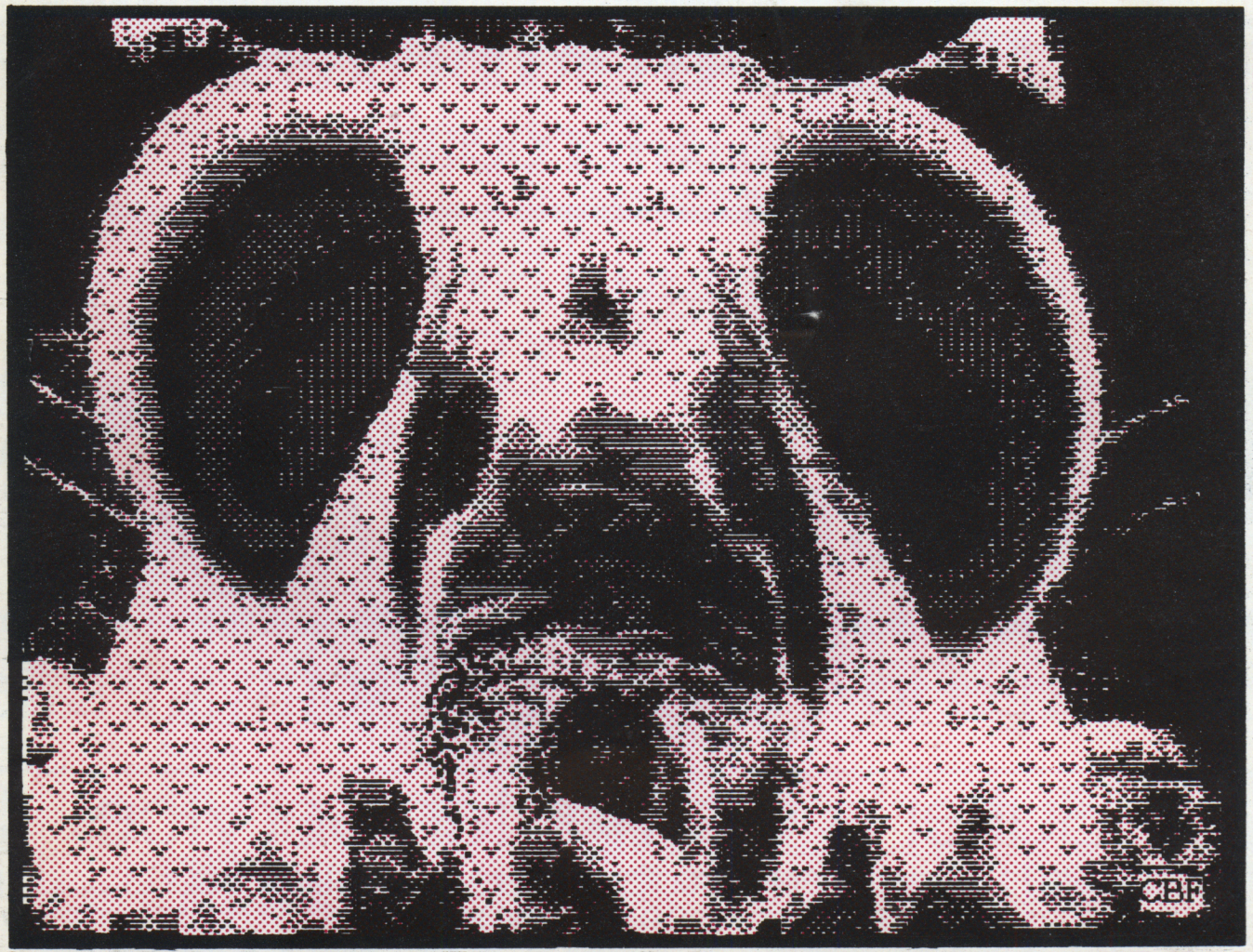

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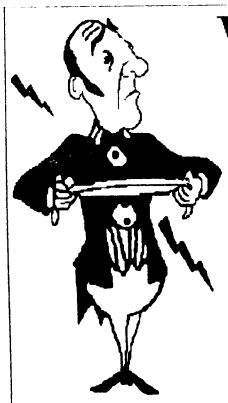

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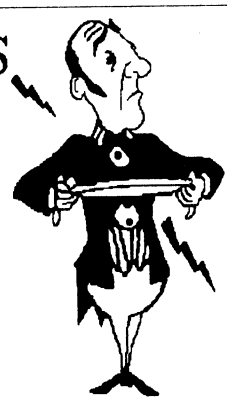

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PSAN UPDATE

By Jim Chapman

A.U.G.I.E. JOINS PSAN. As anticipated in last months PSAN, the Atari Users Group of the Inland Empire (A.U.G.I.E.) from California has become a member of the PSAN community effective with this issue. To their members and readers we extend our warmest (very appropriate for the current heat wave, isn't it) welcome. Hope you enjoy our newsletter! Your added participation will be greatly appreciated.

PSAN MAILING. Each month we attempt to schedule PSAN production so that the newsletter will be in the mail to you prior to the end of the month. Of course we don't always succeed, but normally do come very close to that objective. (The July PSAN was mailed out to all recipients on July 1st.) Third Class bulk mailing is used to keep postage fees down to an acceptable level (17-19 cents per newsletter). But there's a weakness here - Third Class is a lower priority (and thus slower) than First Class (normal letters). Also, Third Class Bulk mail is not forwarded *(it's destroyed!!)* if the address on the mailing label is incorrect! What this means is that you must insure that we have your correct mailing address. *(Close doesn't cut it here! Check your label - the ZIP is especially critical.)* So avoid these problems by making sure that the appropriate officer in your club (i.e., treasurer, secretary, membership chairman) has your correct mailing information!

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LET'S DO THE PUYALLUP!

By Nick Berry, S*P*A*C*E

In about a month from now, it will be time again for the Western Washington (Puyallup) Fair. In the "Hobby Hall" of the fair, there will be a section for computer user groups. S*P*A*C*E has been asked to represent Atari and there will be clubs there for Apple, Commodore and IBM as well. The yearly attendance at the fair, I believe, is around 1 million, so it would be safe to assume that SEVERAL HUNDRED THOUSAND people will pass through the Hobby Hall itself. It boggles the mind when you consider the exposure this allows us. Because of this, it is only reasonable that all of the area clubs be allowed to participate. S*P*A*C*E will be donating an ST and an 8-bit computer for the display so we don't need members to volunteer equipment. What we do need are people to be in the booth each day to demonstrate the computers and answer questions.

We are looking to sign up people for 4 hour shifts on each day of the Fair. Those who help to man the Atari display will, of course, get free admission to the Fair. So here's your chance to get into the fair for free, talk to other computer users and show the general public how good our computers are and the advantages of belonging to a user's group. With a little effort in demoing the ST and the 8-bit machines, we could easily be the "Stars of the Show".

There will only be one person per computer group for each shift, so if you can run an ST but not an 8-bit or vice-versa, then go to a club meeting or visit a club member who has the "other" Atari to see how it works.

The Fair runs for 17 days, September 9 - 25, so we will need plenty of volunteers. Don't be afraid to sign up for more than one shift or only one day. Remember, each shift you work gets you a free pass.

I'll try to make sure that each club gets sign-up sheets to have available at the meetings, but you can contact me directly at 759-1473 evenings in Tacoma. Do it soon while the best times are available. Remember, your participation will determine how well we fare at the Fair!

****

ONLINE ECHOS

By Marc Ingle, S*P*A*C*E

Well, ONLINE ECHOS is back, thanks to The Center City BBS and its message base net-working! Without it I couldn't bring these important rumors and announcements to you, since I no longer have access to GEnie. I hope you enjoy what you are about to read...

RUMORS:

ICD And Atari In Battle! ICD has filed a lawsuit against Atari and Bill Wilkenson because ADOS (the new disk operating system for the 8-bit) looks too much like SpartaDOS. This probably will set back the release date of ADOS a few months or so.

New Atari Computer In The Works! Atari Corp is rumored to be considering production of a new 32-bit computer. This computer, which some people refer to as the 2080TS (2080 thirty-two, sixty-four) will probably have Motorola's new MC88000 processor. The processor itself runs 20 times faster than an IBM AT. Talk about speed!

ANNOUNCEMENTS:

Drawing Program Generates Music! For those of you who like to draw, but don't have the coordination to play music, there is a program being developed just for you! Titled MIDI DRAW, this program allows the user to draw figures onto the screen and then convert the picture to music. This program, which should be available soon, will sell for approximately $95 and could be the future for Computer-MIDI-Music-Creativity.

At Last! 3.5 Inch Disk Drives For The 8-Bit! Wuztek has released a 3.5 inch, 720K, disk drive for the 8-bit Atari. This drive also comes with a built in printer interface and 8K buffer. Also available is a optional Hyperspeed cartridge that increases transfer speed between the computer and disk drive to 150,000 baud. For more information write to: Wuztek, 4521 Campus Drive, Suite 400, Irvine, CA 92715; (744) 733-0189.

XE Game System Upgrades. Due to popular demand ICD has decided to produce a RAM upgrade kit for the XE Game Machine. Apparently it will be very similar to the Rambo XL ram upgrade.

Well that's about it for this month. As usual I'll keep my eyes open for new rumors and announcements. Until then see you sometime in the upcoming months! For those of you who want to call The Center City BBS, the number is 537-4316. This call is local in the Tacoma area.

Disclaimer: Product information was gathered directly by word of mouth (or keyboard as in this case), thus the accuracy of these announcements cannot be guaranteed.

PROJECTIONS

By George Terpening, S*P*A*C*E

The Atari community has been fed quite a few rumors about what Atari is going to do this year. Some have come from Atari directly, only to be countered by someone else at Atari with a different story. This is what I think is going to happen depending on what Atari decides to do. It is based on what I have read and heard over the last few months and what I project will happen.

First the positive view. Atari will go ahead and open the production facility in the United States this summer which will allow them to increase the number of STs available in the States. With more computers available for shipment, they will regain the price advantage that they had over the PC clones and the Amiga by lowering the ST prices down to what they were last year. This will happen some time late this summer when the current tariff levied on semiconductors by the government is removed. The lower prices will be followed up by the promised advertising campaign which will lead to increased sales and carry over into the Christmas season. Increased sales will be good news for all of the user community since software developers are keyed to producing software for computers with a large installed computer base. That base has been stated to be 500,000 computers in the States. The Mega prices should also come down some three hundred dollars at the same time. The increased sales will allow Atari to build/buy the second US production facility and could also allow Atari to penetrate the corporate market and bring out the 68030 board for the Mega and also a Unix like operating system. *(Continued on Page 16...)*

SHAREWARE And P.D. DISKS

*Commentary by George Terpening, S*P*A*C*E*

If you have had your computer (either 8-bit or ST) for very long, you probable have some public domain (PD) software or shareware software in your software library. Some of it you have tried and decided to use. Some of it you have tried and then forgotten.

You probable got the software through one of several methods. It could have been on one of the PD disks produced by a local club, a magazine, or from a commercial operation. It also could have been by downloading the program from a board via a telephone modem, or obtaining a copy from a friend. Finally you could have gotten it by renting the disk containing the program and making a copy. If you didn't find the method you used to get some of the programs, feel free to add the method to the list. No matter how you got the programs, you usually had to pay a fee. This could have been in the price of the PD disk, the phone bill/board user's fee, rental price, or the price of the disk you copied the program to. This is the price you pay to have a large body of software available for your use. The price you have paid for the program does not cover the shareware registration fee. It only covers the cost of distribution of the software. The shareware developer does not get any of this money.

Shareware is a method of distributing high quality (for the most part) software at a very low price compared to the price of a commercially distributed piece of software of the same type such as a spreadsheet. If the software is shareware and you are using it regularly, you should send in whatever the registration fee requirement is and become a registered user. This registration fee usually will get you the latest copy of the program from the developer and sometimes a nice letter if you have included a letter with your fee. Most of the developers are glad to hear from you and really appreciate your comments and compliments. I have never failed to receive an answer back from any developer I have written to when I sent in a registration fee.

Let's face it, the people doing the distribution are doing it to make money. The clubs produce PD disks as a way to fund club activities and buy hardware for club use. The commercial companies and magazines are in business to make a profit. These motives are true for any names you would like to fill in for either category. There is nothing wrong with this motive. It is the American (or Canadian) way.

Now that we understand a little bit about shareware, what about freeware? Who develops it? I believe freeware is developed by two kinds of people. The first kind is the person with a new machine who is learning about it and/or a new programming language. Most of the programmers fall into this class. The second category of programmers are the group that produce utilities and games as their hobby. These people usually come from a professional, engineering, or programming background. They have enough money to support their hobby and produce software to fill some need of their own such as making an extended floppy disk formatter with lots of extra features because they have a need for one and there isn't one out there available to fill the need. They share the new goodie with the rest of us.

How many shareware and freeware programs are out there and how many do you use, you ask? I personally have access to over two thousand programs which include games, accessories, and utilities. There are some demos included, but not very many. There are no picture files or music files. I use somewhere around thirty to fifty of these in my daily activities. That means that I use each program or accessory at least once in a thirty day period. About half of these programs are shareware and I am a registered user of most of these programs. I also have quite a large number of commercial programs which I also use.

Shareware is a great concept. If we all support it, then great software will continue to be generated for the Atari computers at a very low cost. If not, then the programmers will turn to other machines where the concept is supported or release their software in the commercial marketplace.

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A Letter From Atari Corporation

TO ATARI USER GROUPS AND ALL ATARI ENTHUSIASTS:

I was disappointed to read the negative letters and articles regarding comments made by Neil Harris at the West Coast Computer Faire. We at Atari feel that our computers are the clear technological leaders in their classes. The XE/XL line is superior to the Commodore 64, and the ST series beats any 286 or 8088 MSDOS machine; it also beats the touted Macintosh (68000) machines, and even surpasses the Amiga in all areas except for internal sound.

The educational, productivity, and entertainment software available for the Atari machines makes for an excellent combination which yields many uses. My family knows, as we use an 800XL, an XE Game Machine, and a 1040STf. Neil was only saying that the future will bring EVEN MORE POWERFUL computers which will be easier to use, and I am sure he is right. This statement is not meant to belittle today's models or users.

While I am communicating with you, let me clear up a few things and also ask for your help.

The DRAM shortage is still with us and it is inhibiting our distribution in the U.S. We hope this will get better in the 4th quarter of '88. In the meantime, we will CONTINUE TO SUPPORT ATARI COMPUTER presence in the U.S. We will advertise this fall to keep our presence in the U.S.

I ask all of you two things: first, please do not pirate software. Talk your friends out of it also. The software community is suffering and complaining, please police pirating so Atari software companies can thrive. The other favor I ask of you is to be the evangelists of the Atari world. Tell your friends, associates, teachers, etc., how great the XE/XL and ST are.

LET'S WORK TOGETHER TO MAKE THE ATARI MACHINES A STANDARD IN THE U.S.

Sam Tramiel, President, Atari Corporation

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CUSTOMS CONFUSION

High Adventure On The Way To Atari Trek!

By David Becker, T.R.A.C.E.

As a group, preparations for the short trip to Atari Trek '88 had begun months in advance. Each meeting brought us closer to full readiness. Transportation was arranged and available; motels had the reservations; Denny's had a table waiting for us. This years Seattle trip was going to be a snap, or so we thought! Arrangements for last years Atari Trek'87 were unsure, and equipping the trip was a nightmare. In order to ensure enough hardware for a decent display, each member had to supply his own monitor, computer, drive, etc. Visions of slobbering children dancing on top of our precious Atari's did not deter us. Confirming our systems would be insured from damage or theft in a foreign country gave us second thoughts.

A couple of quick trips to the local insurance agent left us confident that our home plans would indeed provide sufficient protection. One less thing to worry about at next years show!

This year our group was lucky enough to have Atari Canada helping out! Together with a local computer retailer we were able to borrow the Atari PC's (TA-DA!!), and a Mega (Whooo!), and even a LaserPrinter (Unbelievable!!). All we had to bring was a power bar and a clean towel.

May 7th telephone conversation:

Terry: Help! Some supervisor at US customs just told me we have to pay duty on the equipment TRACE plans to bring down next weekend!

Dave: There must be some misunderstanding, surely if they know that the computers are to be brought back in a couple of days there won't be a problem.

Terry: I've just tried explaining things to him for an hour, he won't budge. Talking to this guy is like talking your way out of a speeding ticket!

Dave: OK, don't worry, I will take a drive down to the border tomorrow afternoon and straighten things out.

The next morning I prepared all the necessary documents to prove that we were indeed a non profit computer club. I packed back issues of PSAN along with photos taken at the previous AtariTrek and other local shows. I even took a shower! After convincing Chris to join me for moral support and Amanda to come wearing a sexy dress we started for the Canada/US line.

The first thing we noticed was that American customs officials carry sidearms. (Canada customs carry big flashlights!) This did not phase me, I looked the gentleman straight in the eyes and whispered, "Do you think we might see a supervisor please sir....that is if its not inconvenient." The supervisor we were introduced to quickly dispelled any worries I had. He was genuinely friendly and very articulate. After briefly viewing my presentation he assured us that there would be no problem and that we should look forward to our weekend. At that point the supervisors supervisor walked up from behind!

Supervisor Elite: "You can't promise these people there will be no problems!"

Plain Old Supervisor: "I can't?"

Supervisor Elite: "No....permission to cross the border without paying duty on your equipment will be at the sole discretion of the officer on duty at the time!"

Dave, Chris, Amanda: "PLEASE, tell us what to do in order to attend this show and not have to pay duty on $10,000.00 of Atari hardware!"

Supervisor Elite: "There is no way to expedite, in advance, the importation of your equipment into my country. Period."

Plain Old Supervisor: "You may wish to arrange for a bond at one of the brokerage houses across the road. Sorry."

Bond Brokers! What the heck is a brokerage house? I seem to remember my mother warning me about places like that! We had failed completely in our attempt to communicate with US customs. Why not speak to someone within the Brokerage House and be further humiliated?

After winding our way through, around and under semi-trailers and cattle trucks we entered the brokers office. The lady on duty explained to me in a menacing tone that usually they only dealt with cartage companies and business's with accounts. We were given the supervisor's business card (Oh God, please, not another supervisor!) and told to call back (long distance) tomorrow. Great.

I was advised by phone the next day that the brokerage firm would be happy to issue a bond to the user group, providing I supply personal credit information (ie-a credit card imprint), take personal responsibility (I go to jail if the computers fail to return) and pay the standard fee of almost $200.00, all for a slip of paper! Wonderful.

Hey, we've been looking forward to this show for months, saving all our US quarters, talking, planning. There is no way all this red tape is going to stop us from attending (I'll leave the Atari PC's at home and bring my VIC20 if I have to!). It is decided that if need be we will pay for the bond out of club monies. It is agreed that if I end up in jail I will be bailed out with club money (if there is any left).

To put everything into perspective it seems that US customs is worried we will transport this equipment to Seattle and then resell it (it does not matter that we pay a quarter more for our Atari stuff in Canada!). If the supervisor on duty for any reason decides he does not believe the computers will return, he has the option of forcing us to pay the duty, or having us obtain a guarantee (a bond), or simply not allowing the hardware across the border.

We must now adjust our departure time to suit the opening hours of the Brokerage house, should their services be needed. This means rather then leave Richmond at 6:00am to arrive in time to set up in Seattle, we must now leave at 10:00pm the night before. We do not wish to spend money saved for software purchases on an extra nights accommodation so it is decided we will drive slow (yah, really!) and stop for coffee a lot (like maybe 30 times!).

We loaded up by just after 10:00pm, our convoy of cars and trucks is off! A half hour later we arrive to a very quiet Canada customs to obtain green cards proving the hardware came from Canada. Another half hour and we are inside US customs, and what a sight it is to behold. No less then seven customs officials, feet up on the desks, coffee mugs full, telling tall tales about girls, guns and guts! The officer we had seemed much more interested in getting back to his pals than causing us any grief and after requesting serial numbers, places of manufacture and proof of ownership (I had all this stuff ready, smart eh), I was allowed to sign a "Temporary Importation Permit" (no mention of this little baby during my inquiries).

The next morning, unshaven, scraggly hair and with the caffeine DT's....we crawl into Flag Pavilion a little wiser, a little more humble and greatly relieved. Hey, what if on the way back, Canada customs thinks we bought this stuff in the states?

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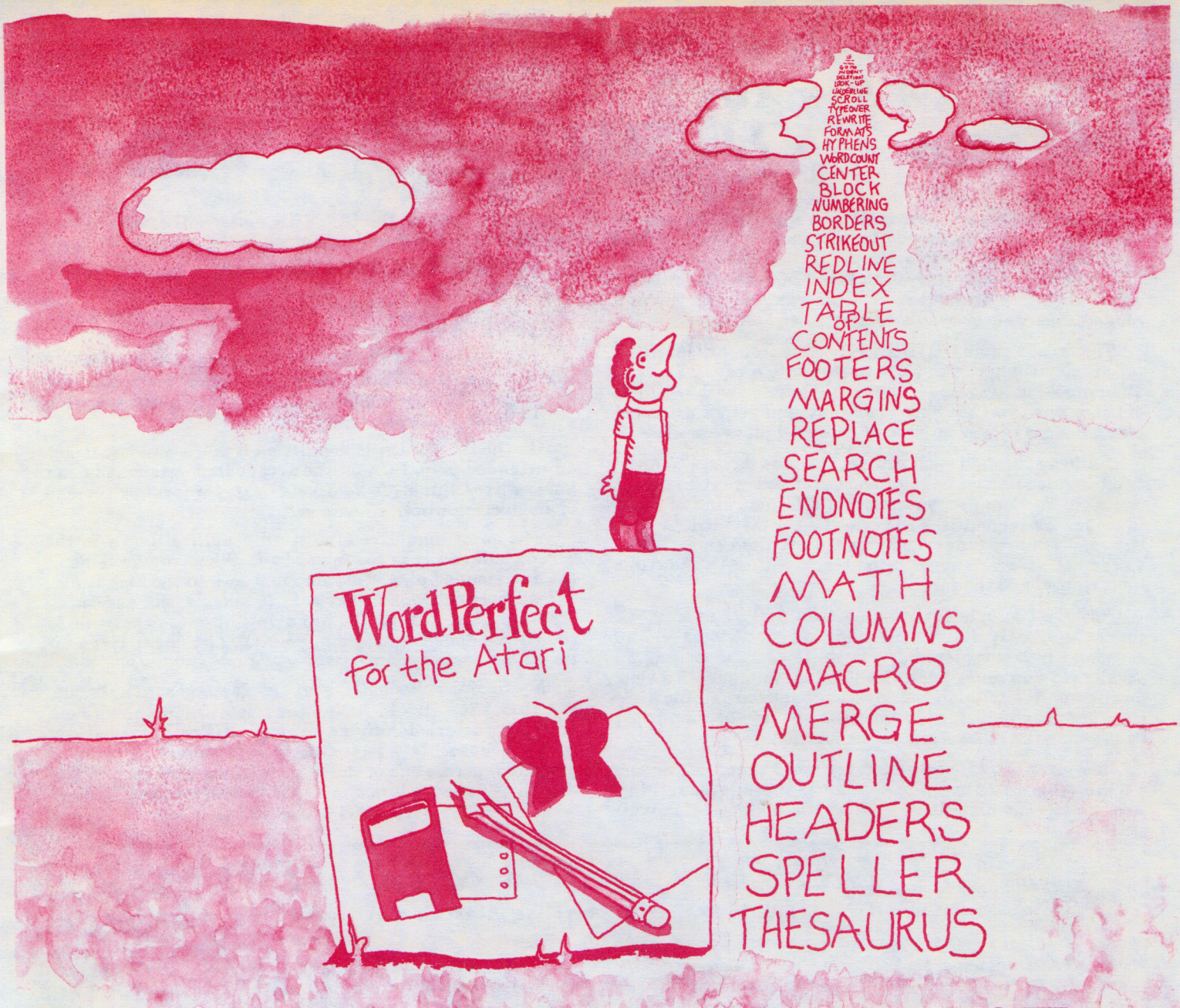

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A New Arcade Game For Your ST!

OUTRUN

Reviewed by Bo Schreurs, S*P*A*C*E

I visit game halls frequently, to see what the newest developments are on arcade type of games. The graphics on those machines are sometimes dazzling and close to real life. The use of only a joystich is out of date. To interact with the game a little bit more, they want to place you in a comfortable chair or even a complete car.

The arcade game OUTRUN is a game from SEGA. It's a type of game where you have to step into a car, a Ferrari. The purpose of the game is to reach the finish within a limit of time, when you are able to do that, you get an extended play. The maximum number of extended plays are 4.

Halfway through each course, the roadway splits up in two directions. You have to choose, if you want to go left or right. By doing so, you select a different kind of track to drive. So it's not like Atari's POLE POSITION, where the road of an extended play is always the same. When you're not able to complete the track within the set time limit, you've lost the race.

Now OUTRUN is available for the Atari ST as well. Of course they only deliver the diskette, not the car. The steering wheel is replaced by the joystick or the mouse. To accelerate one must push the joystick forward. To slow down, one has to push the joystick backwards. Shifting from low gear to high gear and back again is accomplished by pressing the fire button on the joystick.

Booting OUTRUN takes a (very long) time. It reaches a point where you begin to wonder if there is something wrong with the disk drive or that the disk is defective! After a few seconds the OUTRUN music will sound, so that you have something to listen to while the game is booting.

This is the first game which I know of that contains a cassette! Yes, a cassette, the cassette contains a soundtrack from OUTRUN. You can put it in your audio, and play it. I liked this!

The graphics of the game looks good, but I must say that the graphics of the arcade hall version are better, but hey, to see those, you have to put 50 cents in the machine all the time.

On the ST version it is a little bit more difficult to get an extended play, then on the arcade hall version. I don't know why, I think it's because of using a joystick instead of an steering wheel, who knows.

The game emulates almost all graphics shown in the arcade hall game, so that's not bad. When you are able to get an extended play, the computer goes to the disk again, to load the next round, that doesn't take as long as booting the game, but I think it's annoying. I guess that this is the reason that they have a 2 Mb OUTRUN cartridge for the SEGA game system.

My final conclusion is, that the game is worth its $35, but that they should have made booting of the game a little bit faster. Making a copy of OUTRUN for backup was not possible. It seems that the disk is heavily protected, maybe one of the reasons of the long boot time of the disk. Anyway, it is a must for arcade fanatics.

****

ST ERROR CODES & BOMBS!

By Darryl May, Tech Specialist, Atari Corporation

Dear ATARI Customer,

The following is an official list of errors that can appear while you are operating your ST computer. This first list gives you the GEM error messages.

Error Description	GEM Error Codes
OK (No error)	0
Fundamental error	1
Unknown command	2
Drive not ready	3
CRC error	4
Bad request	5
Seek error	6
Unknown media	7
Sector not found	8
No paper	9
Write fault	10
Read error	11
General error	12
Write protect	13
Media change	14
Unknown device	15
Bad sector on format	16
Insert other disk	17
Invalid function number	32
File not found	33
Path not found	34
No handles left	35
Access denied	36
Invalid handle	37
Insufficient memory	39
Invalid memory block address	40
Invalid drive specified	46
No more files	49
Range error	64
Internal error	65
Invalid program load format	66

Those bombs that appear on your screen are error messages from the 68000 micro-processor.

Description	Number of Bombs
Reset:InitialPC2	1
Bus Error	2
Address error	3
Illegal Instruction	4
Zero divide	5
CHK Instruction	6
TRAPV instruction	7
Privilege Violation	8
Trace	9
Line 1010 Emulator	10
Line 1111 Emulator	11
[Unassigned, Reserved]	12
[Unassigned, Reserved]	13
Format Error	14
Uninitialized Interrupt Vector	15
[Unassigned, Reserved]	16-23
Spurious Interrupt	24
Level 1 Interrupt Autovector	25
Level 2 Interrupt Autovector	26
Level 3 Interrupt Autovector	27
Level 4 Interrupt Autovector	28
Level 5 Interrupt Autovector	29
Level 6 Interrupt Autovector	30
Level 7 Interrupt Autovector	31
Trap Instruction Vectors	32-47
[Unassigned, Reserved]	48-63
User Interrupt Vectors	64-255

****

CYBERPAINT 2.0
(Pro Animation Studio)

Reviewed by Marie Foster, FACCS

Program written by Jim Kent
$79.95 from The Catalog (Antic), 1-800-234-7001

I have waited a long time for this product. I ordered it back in March when it first made its appearance in Antic. I waited and waited for it to be really out. Was the wait worth it? Yep it was.

The Catalog states that Cyberpaint 2.0 "is three animation programs in one - a time oriented paint program, a "cel" animation program and a digital optical printer." It also goes on to tell you that if you are looking for an equivalent program elsewhere you would need to pay upwards of $200,000!

This program is a snap to use. Everything that it has (and the list would be so long I wouldn't have room to talk) is available from drop down menus that have keyboard equivalents. The documentation includes a quick reference chart and a function key template to help you remember. You select your colors from a palette that uses both the familiar RGB settings but you also can change the hue, luminance, and saturation which is easier for me to remember. I have not yet finished my "masterpiece" but I have loaded in sequences that have in excess of 600 frames. Now think about having a separate palette for each frame. It is absolutely mind boggling. I checked out the "old" Cyberpaint. I was impressed with its functions. But the limitation of one palette kept me from putting my money down. If the new program had included only this improvement I probably would have paid the price he (author Jim Kent) is charging. But he did not stop there.

If you want, you can switch menus from the palette and have an entirely new range of options and ways to treat color. It is called the color f/x menu and it allows you to experiment and play with color in some surprising new ways. You can test then render any of the following effects: Xerox, Shift, Inverse, Metal, Fade, Mono, Chrome, Red, Green, and Blue.

Please note that any of the special effects can be performed on a single frame or the entire animation or on a range of frames that can be established. These effects are treated separately so you could have one effect on a single frame, another effect on a sequence of from one to twenty for example, another separate effect on a sequence from twelve to thirty, and another effect on the entire sequence. The combinations are nearly infinite.

There is an entire paint program here with all the features you have come to expect plus a few things not found anywhere else. There are several brushes pre-defined and you can grab a brush from the screen. You have tools available like airbrush (and you can control the spread and volume of the spray), line, box and circle in both filled and hollow modes, streak, stipple, fill, polygon, and text. I must say that text is special. This program runs without GDOS. But you can load any GDOS font and take advantage of GEM's ability to outline, italics, underline, bold, and fully scale the fonts.

Hmmm. I am running out of space for more words and I haven't even touched some of the most intriguing aspects of the program. You have a buffer that you can use for an entire screen or a portion selected with the familiar from Degas cross hairs. Now that you have something in the clip buffer you can stretch (or squeeze) it, rotate it, invert it, mask it, or fit colors. Amazing.

You have heard about all those neat tricks that video artists can do with their creations? How about shattering a screen? Want to wipe an image? How about filling the screen with multiple copies of a sprite you created? Want to make a venetian blind out of a screen? How about Rippling (I saw a neat sequence done with Racquel Welch rippling all over the screen!)? Add the following to the list above....Defocus, antialias, crystalize, outline, edge in, unrez, and buzz. This should keep your imagination busy.

Do you like the HBO intro where the Letters get bigger and fly around the screen... and fire works go off.... and armageddon starts.... OK so I am getting carried away. You get the picture. With this program you too can have that kind of effect. I already finished work on my opening sequence for some kids programs that I am working on. Part of it has a book opening. I can't tell you how long it would have taken if I had to draw and register each frame by hand. With the ADO/fx menu it was a snap. I will admit that I am still not real comfortable with the controls of all the things I need to get the effect that I want. But I can experiment to my hearts content as I can preview any selection before I decide to render it. And if you can't remember coordinates (like moi) he has it set up so you can point and click on the screen to control movement or set up a center or move a block for example. It could not be easier.

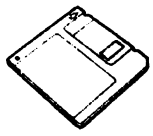
Getting things going you need to make changes to emulate movement and he has not slighted us here either. I am still learning about this part of the program and have been doing some things "by hand", but I know that I will learn to use the matte capabilities and the ability to blue frames as well as get changes. Blueing is like the movies blue screen where you can't see the blue. Once you have made a change you can "unblue" and leave your change intact. Getting smooth changes is easy with this feature.

You can have an automatic traveling mask as well. And if this were not enough you can chose to have it normal, inverse, or XOR mode. I forgot to mention that those of you who figured out how to color cycle will find it here as well.

Cyberpaint loads all ST picture types, Degas, NEO, and IMG. You can load in normal mode or overlay it or underlay it into your animation. And again, you can load a single frame or the program will automatically load it into a range of frames or the entire sequence. You can also load in CAD-3D sequences so you can spiff them up with colors and 2.5D cel animation. You can also load in delta animations and Aegis Animator scripts and you can save and load palettes and movement instructions (ADO's). Finally, he has graciously opened up his programming techniques so I can use my sequences in my own programming projects.

I am very impressed and thankful to have this program in my library. Thanks Jim. I could have wished for a section like Spectrum has where Darrel Anderson gives hints and tips on "how to do it". And for some reason I have trouble understanding his instructions in the ADO/fx portion of the manual. But no one can please everyone 100%. Call me 99% satisfied. Can you beat that?

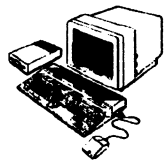
****



GFA BASIC

A "Hands-On" Review

By Mike Marsh, STARBASE



There's been a call, mellow and tactful but still audible, for grist for PSAN. I bought GFA BASIC a couple of months ago, and it seemed like a good candidate for review, so here goes.

I bought GFA BASIC on Bruce Noonan's recommendation. I had been trying to perfect an address label program, and was yelling about my Atari BASIC at a STARBASE club meeting because it could not seem to give me back a string data format file, either sequential or random access type, in the same form that it was put away. Instead, it would swap data fields among records, or obliterate some fields altogether, or print them out in left field, or at the very minimum, sprinkle just a few exclamation points through the printed material. An un-named STARBASE user's group member with acknowledged expertise in programming based in-part on his revision of ST-Writer said, "Atari's BASIC Editor is a piece of junk!"

GFA BASIC Interpreter comes with a 300 page User Guide which describes the structure of this language briefly, tells you how to use the Editor (in which programs are written as well as being edited), and lists and describes all commands, functions and error messages.

The disk contains the BASIC Interpreter (more about him in a minute) and two other very valuable programs. The first will read a program written in another version of BASIC as a text file (that is, it does not stop and throw up if the BASIC syntax does not suit it), and print it on your screen in GFA BASIC format. It recognizes and accepts lines of programming that are "OK" in GFA, and prints an arrow in front of those which are not OK. This eliminates 90% of the agony of transcribing, but leaves you with the other 10%, figuring out what is needed to get rid of those arrows.

GFA is trying to develop a complete translator, and a developmental version is on the disk, but it only got through about 4 lines of my code.

The second handy feature is a "Run Only" program called, appropriately, GFABASRO. GFA does not want you giving other people their BASIC program because they want to sell it. On the other hand, they see the merit in letting you write and sell programs that run in GFA BASIC. Their solution is a program that does not let you write any new program, or edit the existing one, but does let you run it and call files from it. You boot your disk, then double click on the program you will use and it loads in a single operation. With Atari BASIC, on the other hand, you must load BASIC, then call a a file menu, and finally load the program you want.

But, back to BASIC's. GFA is a peculiar animal in about four different ways.

1. It has no line numbers! Right away you yell, "I'm going to get lost!!" But not so. This is "structured programming" ala PASCAL, so I'm told. Some lines are indented, and the indentations are fraught with meaning, telling you whether you have backed out of a procedure that you went into, correctly. For example, each "If" statement is followed by a series of lines of indented statements until a critter called "Endif" is reached. It pops back out to the margin that the "If" was at - don't worry, GFA lines up all the margins - you just write.

2. There is only one statement or command per line. (This makes for use of three times as much computer paper, but makes reading the program ridiculously simple.)

3. The program is structured into Subroutines. These are essential in GFA, because they are the addresses that your program must find when executing. In Atari BASIC they are optional.

4. To help you find your way around in a subroutine, there are Labels. You say "Goto Arrow", and then write the word, Arrow, with a colon after it at the place in the same subroutine to which you want control transferred.

The Editor is the environment in which you write programs. It checks the syntax of each line when you touch "enter" or touch either "up arrow" or "down arrow". If it objects, it dings at you and refuses to let you leave that line until you fix it. Annoying at first, but it really makes you learn fast.

Edit functions like "Find" and "Replace" make it easy to edit in a non-linear environment (No line numbers, get it?), and there are also Block Move, Copy, and Delete commands and a program merging capability that make it easy to use parts of a program as building blocks.

When you try to "Run" a program, Editor looks it all over first, and gets in touch with you if the program has problems like no NEXT statement after a FOR statement by flashing the appropriate error message and places the cursor on the offending line. You can switch out of Edit mode to Command mode with one keystroke, and back into it with two.

By now Al is saying, "Stop already - this is not the GFA User's Guide!", so at this point I refrain from typing out a program in GFA BASIC and translating it into Atari BASIC to compare the two. Instead, I will tell you what you can do with this good language.

You can call GEM functions. This means you can dress your program up with drop-down window menus and file directories, operate the Mouse, and in general raise the same sort of havoc that Atari's "1st Word" and similar programs allow.

You can call "C" programs. I don't write in C, so this is not useful to me.

You can draw pictures and write music (check out my classical number, "Revenge of the Old-Fashioned Doorbell", in my address program).

I haven't figured out how to "scroll" a program one character at a time as a word processor does, like for example you would want to do if you were writing a spreadsheet program. But, it would not be difficult to scroll a field, or block at a time.

GFA runs quite fast, and takes up very little memory (only 57K) compared to Atari Basic. To make your program run much faster, you spend another $39 for a GFA BASIC Compiler, a little number that converts your program into machine language. Another product that they talk about (sounds like CAD) is GFA Vector, a program which creates graphics, rotates them about either of the three coordinate axes, converting your instructions into machine language for "real-time animations".

(Continued...)

SPEED BUGGY

An ST Arcade Game Review

By Bill Estes, STDIO

From Data East, $39.95 retail

Speed Buggy is a fun and enjoyable game for the whole family. It's charm lies in the fact that it doesn't try to overpower you with stunning graphics and fancy digitized sound. The animation is easy on the eyes and doesn't try to be any more than just a fun game. The play of the game is simple and joystick operated. You have two gears to shift through (high & low) and speed is attained by either pushing the stick forward or slowing down by pulling back on the joystick. Steering is accomplished by moving the joystick from left to right respectively to go in the direction desired. You can also use the keyboard controls and the mouse to control you buggy, but this method isn't as smooth as using the joystick. While the graphics are not stunning, they are crisp and use a wide variety of color to keep the landscape colorful, but not necessarily true to life. The animation is smooth and easy on the eyes. The sound, while nothing special, is adequate for the game and doesn't interfere with the play.

The object of this driving game is to steer your "Speed Buggy" through the five legs of each of the five courses that are offered to you. The courses are: Off-Road, North, South, East, and West. Each course offers scenery suggesting various areas of the country. Off-Road being the easiest and the other four courses being harder. You are challenged to complete each of these courses while steering around various rocks, trees, barricades, lamp posts,fences, and bridges over water obstacles that sometimes have these obstacles on the bridges to help slow you down. Each leg of the course has a time limit for you to complete that leg of the course, and if you run out of time, the game is over and you will have to start over again.

To help you score higher on each course there are gates that you can drive through to gain points. Driving through dangerously placed "time" gates will give you an additional two seconds on the next leg. You can also collect flags for more points and collecting them in the correct order will give you bonus points as well. Don't hit the fences, walls, trees, etc. or you will flip over and slow down your "Speed Buggy". There are logs that will help you jump over obstacles and small rocks and tree stumps that will tilt your buggy on to two wheels as you roll over them, allowing you to squeeze through narrow gaps.

This game is a port to the ST from the arcade game of the same name. Data East is the distributor of the game under license from Tatsumi out of Japan. The documentation is simple and easily explains how the game is played. While there is nothing complex about Speed Buggy, it isn't the kind of game that you can master in just a few hours. This game will keep you entertained for many weeks.

Overall, Speed Buggy is the kind of game that will appeal to kids of all ages. This is not a mindless violence or shoot-em-up type game that are popular, but, a eye-hand coordination type game that is fun to play and will give you a good challenge at any level of play. Try to finish all five courses and enter your initials in each "Hall Of Fame" for each course. This was a feature that I found pleasing for a change. Most games today seem to forget this part of game playing, showing off your high score and setting a level for others to beat. The game is copy protected so you will not be able to make a backup copy for your daily use. There was no offer to get a backup copy in the instructions so be careful with your original copy. As an 'Arcade Game' gamer from way back, I highly recommend Speed Buggy to anyone who is into driving games or just likes a good, well put together game.

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GFA BASIC (continued...)

I haven't compiled my address program to make it faster yet, but I did go through it and convert all counting variables from Floating Point to Integer type to see whether I could get it to "sort" faster. The time that a "bubble sort" routine takes increases as the square of the number of records to be sorted. My program sorts 50 addresses in about 12 seconds, but took 40 minutes to sort 1,100 records! After changing the counters to Integer type, though, (and after changing from the familiar "For A = 10 To 1 Step -1" to their faster "For A = 10 Downto 1") it took only 18 minutes to sort 1,250 records!

GFA BASIC is easy to learn. (A larger text is available if you are starting from scratch or (says I to myself) if you really want to learn how to use this stuff.) It is fast and seems reliable. I had some difficulty keeping track of the Labels that I was creating. I used Out1, Out2, etc. and was up to Out14! It makes more sense to name labels with relationship to their function in the program.

Problems that I have encountered so far:

1. Very occasionally, when I ask it to print a file, it stops for no reason after about 1 1/2 pages. When I repeat the command, it goes all the way.

2. If I try to break down a string with "Left$", I get an error. (Just like in Atari BASIC. Maybe I don't know what I am doing.) However, "Mid$" works all right, and can produce the same result.

3. The Editor does not give you a GEM directory of the data files. However, files are called using the usual BASIC commands, and a "Print Exist [filename]" command can be used to see if the named file is present.

I like GFA BASIC, and am glad that I now live in a structured environment, at leat as far as programming is concerned.

****

MOM's Corner

Quoted by George Terpening, S*P*A*C*E

Plum blossoms give of their fragrance, even to them who break off their limbs. - *Chio*

We are greatful to those who are here and would urge you to encourage attendance of those who are not here.

The years are beginning to add up when it takes longer to rest than it did to get tired.

The minister building a skyscraper church was asked why build that type of church. His reply was "I don't know, we're building it on speculation".

So long until next month!

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The SUPRA FD10

A 10 Megabyte Removable ST/Mega "Hard" Disk!

Reviewed by Ernest Schreurs, S*P*A*C*E

This week (mid-July 1988) I finally got my SUPRA FD10 10 megabyte removable hard disk system. There hasn't been much information available about it up to now... And since this is a very interesting device, I'm writing this review. After working with the drive for a few days, I am already very pleased with it...

Now I used to resent using hard disk systems because they are usually very noisy. The spinning of the disk and the built-in fan make a lot of noise that gets on my nerves. Not so with the SUPRA FD10! This is mainly because it really isn't a hard disk. Inside the case we find a KONICA 10 megabyte floppy disk drive. There is no built-in fan. The drive gets a bit warm with heavy use, but apparently that causes no problems. The disk motor is only running when you are accessing the disk. If the disk is not accessed for around 40 seconds, the motor stops, and blessed silence occurs. In that respect it actually works just like a regular floppy drive. The drive is connected to the DMA port of the ST. The access time is averaged at 80 ms, which is slightly slower than regular hard disks, but still considerably faster than a normal floppy drive.

The disks used in this drive look like normal 5 1/4 inch floppies. However, they are marked as "extended high density". That is also the reason why they cost around $35 a piece - Not normal by any standard! But then again, the price per megabyte compared to 3.5 inch disks is relatively equal. And being able to remove the disk, replacing it with another, and therefore having close to unlimited "hard" disk storage is very attractive. On normal hard drives, you usually end up storing lots of games and utilities that you hardly ever use. Then one day you discover that 30 or 40 megabyte really isn't that much storage space. You end up buying a second drive, or deleting a lot of files to make room for other files. With a removable disk system, it is easier to put all games on one disk, maybe even divide them into high-res, lo-res and medium-res. And if you need to do some graphics or word processing, you can put in a graphics disk or a word processing disk.

If you always just couldn't decide on buying a hard drive because you were not sure about what capacity to get, the FD10 is a good way to start. Expanding is easy. The drive has a DMA connector on the back that allows you to hook up an additional hard drive. The regular ATARI hard drives can be plugged directly into the FD10. Of course you can also use SUPRA drives. Apart from that, there is also a 25 pin SCSI connector on the back, that allows you to get a SCSI hard disk and plug it in. The controller in the FD10 can handle an additional drive with no problem, so there is always the capability of expansion. You usually don't even have to change device numbers. Since the FD10 is set up as device number 4, it will not conflict with the default setting of other hard drives. All you'll have to do is plug the drives in.

The FD10 also makes a good backup device. You can copy important files to the FD10 much faster than you can to regular floppies. If you start using this disk as primary storage device, and later add an additional hard drive, backing up the hard drive will be very easy.

The disk format is compatible with the format used on IBM PC's. If you happen to be working with an IBM PC, these KONICA drives are being installed in those systems more and more. And you can take your disk and use it on the IBM or take an IBM disk and use it on your ST. This is very useful for people who like the graphics on the ST, but already have other systems installed. The FD10 might become available on other systems like the AMIGA and the MAC. However, those system do not use the MS-DOS type format (as far as I know), so the disks will probably not be compatible.

The FD10 also allows you to read IBM format 360Kb and 1.2Mb diskettes. It's as simple as putting the disk in the drive and clicking on the disk icon. When a disk is inserted, the drive figures out what kind of disk was put in, and it will adjust to that automatically. Note, however, that you can only read the 360Kb and 1.2Mb disks. The drive will not write to them. If you try writing to them, you will get the dreaded "data on the disk may be damaged" box. The same box appears if the disk is write protected. The 10 megabyte disks can be write protected just like we are used to on the 8-bit ATARI's by covering the notch in the disk. This might be useful if you use the drive for backing up data, and you want to protect the disk from being accidentally erased. I also tried putting in a 8-bit disk, but that was not appreciated by the drive. It tried very hard reading the disk, but of course it couldn't. I wonder if the new XF551 is compatible though, since that seems to be an IBM compatible drive?

The drive comes with the regular Supra hard disk software and utilities. Included are the boot program and the hard disk driver (a special version for removable disks). There is a sector editor that can be used on the hard disk, for the more adventurous amongst us. The normal utilities allow you to set up partitions. Although you cannot partition the FD10, these utilities can be used when you hook up an additional disk. The software even allows you to set up partitions larger than 16 megabytes, although GEMDOS doesn't seem to like that.

There is also a real-time clock built into the interface, and it comes with software to automatically set the ST's clock. Actually all SUPRA hard disk models that have both the DMA and the SCSI connector on the back have this clock built-in. There is also a program to set the clock if needed.

On my utilities disk there was also a program called BOOTPIC.PRG, which looks for NEO or DEGAS pictures in the AUTO folder and displays them during the boot process. After the desktop is initialized, the picture is cleared from the screen. This is especially useful with the removable disk, because that way you can set up multiple disks and have a picture file on the disk that shows the type of disk or application, or the name of your company or whatever. A file containing an alternate path allows you to display pictures that do not reside in the AUTO folder, as long as the BOOTPIC.PRG resides there. Speaking of pictures, it comes with the picture display program that allows you to display pictures very fast from your hard disk.

(Continued next page...)

"DISKEY BUSINESS"

By Darren Tonnessen, KCAce's

"Armond" was your typical "Atarian". He started with an Atari 400, upgraded the keyboard and memory, had four disk drives, blew his computer up with "mods", and finally moved up to a 16-bit Atari ST, and still did "mods". Armond also loved Star Trek and watched all the reruns even though he could recite the whole series by heart backwards if he wished.

Armond always had a smirk on his face -- as if he had just swallowed the cat, and for some reason he looked as if he was always scheming about something or another.

Most Atarians love their computer and despise other brands, but Armond loathed people that owned any other computer to a point that was almost ridiculous. He would often torment them and spread the word about the unknown computer, the Atari ST! Armond was a dedicated Atarian!

One Monday morning at precisely 8:00 Armond waited for the bank doors to open so he could withdraw five thousand dollars in crisp bills. His reasons became evident as the day went on.

His next stop was a computer store that just happened to be having an anniversary sale. Armond strolled through the doors adorned in a pin-stripe suit and argyle sox. He mentioned something about an oil business in Saudia Arabia seconds after the high pressure salesman pounced on him. Armond had this guy where he wanted him. He was obviously on commission. A smirk came across Armonds face.

"I think I need about 40 computers, or whatever you call them. Someone in my company told me I need them. You sell computers here, don't you.", he asked very well knowing what he wanted.

The young salesman had his mouth to the floor and could have easily stepped on his own lip. It was his second day on the job, and if he made the sale there would be a hefty bonus check in his hands. Sweat was rolling off his forehead like a broken faucet, and he immediately showed the most expensive computer.

"Isn't there a thing called a mouse you can use instead of that keyboard?", Armond asked straight faced. The salesman told him that was extra, as well as the hard disk port, midi ports, serial and parallel interfaces.

"Wait, I heard about a fairly new computer...", he then opened his wallet making sure the salesman saw the several hundred bills and acted as if he was looking for a business card or something. The salesmans eyes opened wide, and his face turned once again flush. "I know, it was called the... the Atari ST.", Armond said looking up from his wallet only to find the bewildered, unenlightened look he had seen so many times before from IBM and MacIntosh simple minded people.

"Atari", the salesman laughed, "the game machine is the only one I know of. If you want business then you'll need an IBM or compatible, or even a MacIntosh -- not an Atari." he chuckled, and pointed over to another machine.

"Are you sure? The Atari is number one in Europe and growing stronger in the United States." Then, like a speeding bullet he started rattling off traits about the computer. "Its faster than a Mac, faster than an IBM, comes with a hard disk port, serial and parallel interfaces, midi ports, mouse, and lots of memory. You can even use IBM software. It can even run MacIntosh software faster than the Mac can! I don't know too much about it though." Armond looked the salesman in the eye and saw that he got his message across.

"You said that if I want business I need an IBM or MacIntosh, but if you want my business you need to get some Atari ST's in this place!", Armond turned on his heels and walked out the door not about to look back. Armond had made his point. He went back to the bank, made a healthy deposit and went home to "play" with his computer.

Several weeks later while Armond was passing the same very store, he saw a very colorful banner that oddly enough said "ATARI". Surprise he thought, and decided to take a peek.

As he walked past the windows he noticed colorful displays and business applications running from 1040's and Mega's. A smile ran across his face like a Cheshire cat.

He opened the door and heard a salesman talk to a customer saying, "If you want business and action, you want an Atari ST. It's truly power without the price. Just check out the graphics... and look at this..."

"Armond" was not your typical Atarian, but it sure wouldn't hurt to have more like him... spread the word.

(Author's Note: "Diskey Business" may become a regular PSAN column of off-the-wall computer topics.)

****

The Supra FD10 (continued...)

Finally there is the program to park the head. The FD10 is not really a hard drive, but it can be parked. However it is not strictly necessary, since you can also insert the piece of cardboard for shipping, or just a cheap 5 1/4 inch disk. Usage of the disks is just like using a normal floppy drive. The drive can be opened while it is spinning. It will then stop spinning immediately. When you insert a disk and close the door, just like on the ATARI 1050 drives, it will start spinning immediately. If you had a window opened for the drive before swapping the disk, hitting the escape key will update the directory just as with the 3.5 inch disks. Formatting one of these 10Mb disks takes about half an hour. All other operations on the disk are almost as fast as on regular hard drives.

There are some minor problems that I noticed while using the drive. For one thing the ST will not boot from the floppy drive when the FD10 is plugged in, but not powered on. This is not a big problem, since the drive makes no noise at all when not in use, so the best thing to do is just keep it switched on. The DMA cable is somewhat short, but that is the case with all DMA cables, since the data transfer rate is so high, that longer cables are less reliable and prone to interference. Finally, the manual that comes with the drive is the manual for the normal fixed hard drives. There is a 10 page booklet that describes the differences between the FD10 and the normal hard drives, but it lacks specific information associated with the fact that the disks are removable. I hope I fixed that with this review!

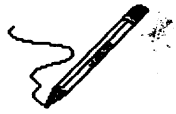
All in all I do not regret choosing this drive above a real hard disk system. The only drawback was the price tag, a little over $1000. This is due to the high cost of the mechanism used. Maybe these prices will come down in a couple of years. But then, who wants to wait forever?

****

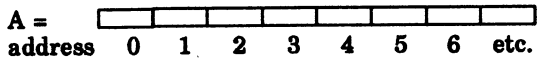
PROGRAMMING FOR FUN

Exploring BASIC Matrices and Arrays

ST Tutorial by Brian Hogan, S*P*A*C*E

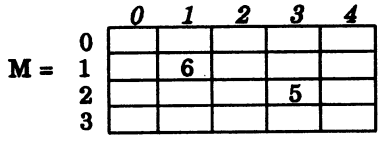


This month I decided to concentrate on using Matrices and Arrays. When teaching BASIC at the college where I work, I find this concept to be a hard one for many of my students. Yet they are practically indespensible in many real programming tasks. Last month's column featured an array to do the job at hand. If you recall it gave us instant access to the morse codes for each letter. An array is simply a 'long' linear list of numbers or words. An array might be visualized as in the following:



Each 'box' can hold a value, all referenced by the array's name of A and which box (address) it is in. Often the first box has an address of 0, the next one has an address of 1, etc. Sometimes this can be altered by your version of BASIC. For example, in GFA version 2.0, you can give the command **OPTION BASE 1** in your program that will make the address of the first box 1, address of the next box 2, etc. True BASIC allows you to specify any integer as the beginning address.

A matrix is the same concept expanded to a 2-dimensional list, consisting of rows and columns. A matrix, whose size is given by **DIM(3,4)**, might be visualized as follows:



As we can see we have rows numbered from 0 to 3 and columns numbered from 0 to 4. Values (numbers or words) may be stored in each spot by specifying the row and column the spot is located. For example, **LET M(2,3)=5** would put a 5 in the spot that has row number 2 and column number 3 (as shown in the diagram). A command like **LET K=M(1,1)+M(2,3)** would get the values of 6 and 5 from their 'spots', add them together and assign the answer to the variable **K**.

Ok, for fun, let's create a program that will create a bunch of lottery numbers. (I got all excited about this last month as the Washington State Lottery jackpot hit $12 Meg!) What a natural for a matrix. Each game (a row) consists of 6 numbers. We could store 50 games in a matrix with a size given by **DIM(50,6)**. Ok, here's my program, written in GFA BASIC, heavily interspersed with comments.

```
Dim Games(1000,6)
Input "Number of games to create?( max. of 1000) ",Ng
For I=1 To Ng
  For J=1 To 6
    Let Games(I,J)=Random(44)+1
  Next J
```

(TIME OUT)

A Double loop is the main way to get a whole bunch of stuff into a matrix real fast. Starting with row number 1(I=1) we go through the loop J=1 to 6 to fill the first row with 6 random numbers from 1 to 44. Some of the numbers may be repeats, however, and they certainly are not in any order. The next part of the program takes care of that.

```
(BACK TO BUSINESS)
Rem now order the numbers and get rid of duplicates
 Repeat
  Let Flag=0
  For J=1 To 5      ! A simple bubble sort
    If Games(I,J)>Games(I,J+1) Then     ! out of order
      Swap Games(I,J),Games(I,J+1)      ! put in order
      Let Flag=1     ! reminds us a swap was made
    Else
      If Games(I,J)=Games(I,J+1) Then   ! Duplicate #
        Let Games(I,J+1)=Random(44)+1 ! Pick another #
        Let Flag=1    ! reminds us a new #  was chosen
      Endif
    Endif
  Next J
 Until Flag=0   ! if Flag = 1 then numbers may be out of
 Rem       order or new number may be repeat--do again
Next I             ! Now pick numbers of next lottery game
```

(TIME OUT)

The bubble sort is a simple idea. Numbers in the list, if ordered, should be from smaller to larger. If a larger number is in front of a smaller number, then the list is not in order. The program simply goes through the list of 6 numbers time and time again (swapping numbers if necessary or picking new numbers if there is a duplicate), until all numbers are in ascending order. Now what do you want to do with all those games? Perhaps print them out (or at least some of them) on the screen; or perhaps print all the game out on paper so you can fill out your lottery tickets; or perhaps do an analysis of the games, like seeing what percentage of the games have consecutive numbers; or etc. etc. etc.....

(The following can be added to print results to Screen)
(or to the Printer -- your choice!!)

```
Print
Input "How many games do you want to see? ",See
Open "",#1,"CON:"   ! channel #1 is screen
Open "",#2,"PRN:"   ! channel #2 is printer
Input "Enter 1 for output to screen, 2 for printer",N
For I=1 To See
  For J=1 To 6
    Print #N,Tab(6*J);Games(I,J);
  Next J
  Print #N
Next I
Input Dummy$  ! just keeps the program from ending and
Rem                have the message window show up
```

Challenge: Write a routine to tell you what percent of the games created have at least two consecutive integers. I keep getting something like about 54%. You need to pick a large number of games to get good numbers -- for heaven's sake don't print them all out! I'm not sure I'm smart enough to figure the exact theoretical probability, but it seems like an interesting problem. I'll write my solution next time. How about a simple graphics oriented game next time?

****

USING YOUR NEW HARD DRIVE

By John Dilworth, STARBASE

As this month's "volunteer" for our struggling editor, I racked my shrinking brain on what to write, until Ron Ball made a suggestion: why not write about how I use my hard drive (HD). "But I don't have any technical knowledge about hard drives," I retorted. "No problem," he calmly replied, "I want to know how you USE it."

Well, having a HD sure has made life easy and lazy. But I would be the first to recommend that your initial system upgrade should be a modem, not a HD. Modems are much less expensive and open up a whole new world of computing through private and pay bbs services.

But once you have a modem and some extra cash, by all means consider a HD. It will speed up disk access, save wear and tear on your floppy drive, and greatly enhance your storage space. Hard drives tend to run $600-700 for the first 20 megs, and about $100 for each additional 10-15 megs. There are several makes available; any of the various Atari rags have run comparisons. I myself own a 20 meg Supra, connected to a 1040ST. My particular model has no internal fan, so it tends to run hot, although so far so good. Still an internal fan is very desirable.

Once you plug in the HD, it must be formatted with a utility supplied by the manufacturer, then partitioned. Of course, you could just have one large partition of the whole 20 megs, but searching files would be a real chore. Partitions are like individual drives, and must be installed on the desktop to be read. The first partition will usually be your boot drive, i.e. the drive that automatically boots up your whole system when you turn it on. Again, a utility from the manufacturer sets this up. This drive will also contain your auto folder and all of your desk accessories. Since this drive will have the most frequent accesses, keep its size small, around 1 meg. This will speed up backup, a very important task we will discuss later.

How you size your other partitions (drives) and what folders/files you put in them are only limited by your imagination and needs. For example, I have four partitions: drive C as the boot drive, drive D for bbs stuff, drive E for utilities, and drive F for applications such as word processing or spreadsheets.

But what you put in your boot drive does make a difference. I would highly advise a bootup program/ accessory selector such as SUPERBOOT 4.1 or DESK MANAGER 2.0. These shareware programs allow you to choose which programs and accessories you wish to work with on bootup. Since GEM only allows 6 desk accessories, such a selector is extremely handy. For example, you can configure your desktop to open to your arc utility, and install a ramdisk. With so much memory available, it is quite easy to exceed the 40 folder limit of TOS. The PD program FOLDERXXX.PRG removes this limit and has a permanent spot in my boot auto folder.

For ease of movement among the drives, I would highly recommend the UNIVERSAL ITEM SELECTOR II from A&D Software (reviewed 7/88 in PSAN). It replaces the original GEM file selector box and is light years more versatile. For only $20, it is the best software buy available. For those who are broke after purchase of the HD or need the $20 for beer or the kids, there are the PD programs FSELECT 6.0 and STSELECT, which are similar to UIS but not as powerful.

To speed up accesses to the drives, the shareware file FATSPEED is useful. This utility calls the FAT table immediately, thereby quickening drive access. TURBODOS from France is similar. The software blitter emulator, TURBO ST (reviewed 5/88 in PSAN), accelerates text screen printout, but is pricey at $40.

Once the HD fills up with files, you will notice a slow-down in drive and file access, as well as loss of memory. There are at least two approaches to correct this, both recommended. First and foremost, prune the HD of deadwood, files you no longer need or seldom use. It is surprising how many such files accumulate on the increased storage space of a HD. (When I had a 256k 800XL, I never thought I could fill 20 megs.) The second approach is to periodically tune up the HD, by removing non-contiguous clusters and various write errors. I do this with HARD DISK SENTRY by Beckemeyer Development. I was able to retrieve almost 1.5 megs of memory with this program. TUNE-UP by Michtron does the same thing but requires more disk space. In the public domain is FSCK, but it is less reliable.

Before using any of these drive optimizers, take the time to back up your HD, in case they destroy your FAT tables and lose files (I speak from sad experience). Indeed, it is always a good idea to back up the HD now and then, since HD crashes occur to the best of us for all sorts of reasons, from the obvious (electrical surges, heat, viruses) to the mysterious (bad day, wife's evil eye, cat hair?). The slowest method of backup is copying files from the desktop to the floppy with the mouse. Much faster are various programs specifically designed for this purpose. They usually calculate how many disks are required to back up a partition and then automatically copy the files onto the floppy from the HD. TURTLE, in the public domain, is quite powerful, although it limits you to standard formats. FLASHBAK by Beckemeyer is very fast and can use extended formatted floppies, allowing more files per floppy. Its drawback is that it creates an image file which can not be read from the desktop. BACKUP12 is PD and allows extended format, but is much slower than either TURTLE or FLASHBAK. HARD DISK BACKUP from Michtron gives you the option of image vs regular copies, but I have not used this program.

Regardless of which backup program you choose, be prepared to use about 30 disks to back up 20 megs. Once the first backup is completed, subsequent updates go much faster. Another trick is to arc your various folders and save them to floppies, and back up those files that change often such as your boot drive accessories, word processor files, BBS numbers, etc. For arcing/unarcing. I strongly advocate ARCSHELL 1.96a or DCOPY 2.88. Both are shareware and versatile.

Lest I forget, your HD utilities that come with the HD should always be available on a floppy, in case of HD crashes when you will need them to reset everything. I do turn off my HD between sessions with the computer, but many leave it on for extended periods of time without obvious harm (such as running a BBS). Occasionally, a sector or two will go bad and glitch a program. By moving the file to a different area or partition, it may work just fine.

Well, that does it for this "volunteer". Hope it helps, Ron. And thank you (?), Al.

****

MAGIC REFRESH

Getting Started With The ST's Magic Sac

By Chuck Trier

(Reprinted from ST Report)

Now that Dave Small is working on the 128K Rom version of the Magic Sac (also called 'Small Wonder' or 'Super Sac' by his admirers), perhaps it wouldn't hurt to do a memory refresh on our Magic Sacs.

For the newcomers, Magic Sac is a cartridge (two Apple 64K Rom chips are inserted before use - check with your club for further info) that plugs into the ST. With the right Magic program (currently version 5.9) it allows you to run lots of Mac software. No, you can't directly read Mac disks, but you can get a lot of Mac programs via modem from the networks that will run. A one megabyte ST is the minimum requirement (a double-sided drive helps, too). Oh, and before I forget, once you get the Magic Sac, you can just leave it plugged into the ST, it won't hurt it or interfere with the running of regular ST programs in any way.

How do you get up and running with Magic Sac? First you need to format some Magic disks. You might be familiar with DCformat.prg for the ST. Run it, select the number of sides, hit the Magic button and ... zowie! -a magic formatted disk!

What goes on this magic-formatted disk and how do you get it there?

1) Ramplus2.0
2) System 3.2
3) Finder 4.1
4) Stuffit1.40
5) FontD/A mover

These are all very useful (system and finder are required) Mac programs to have on that first Magic-formatted disk.

To get Mac programs that you download from a bulletin board using Flash from an ST disk to a magic disk, put the Mac programs in a ram disk D and run TV299a.prg (by Doug Wheeler). Under the drive menu, select drive D for the ST and under the file menu select 'ST>Magic Sac'. Insert a magic-formatted disk and transfer the Mac program. Practice a little, you'll get it!

All right, we have what we need on the Magic disk, and here is what we have on the ST disk:

1) Ramdisk program.
2) Modem communications program.
3) DCformat program to format either ST or Magic disks.
4) TV299a.prg to transfer Mac programs from ST to Magic disks.
5) 1Magic.prg and Driver program.

Now run the 1Magic program to turn the ST into a Mac. If you hit a snag, you might try reseating the cartridge to make sure all of the connections fit right. You should get screen that tells you to insert your Magic disk (the one with system and finder on it). You should then get a Happy Mac face on the screen (you may need to leave the magic disk UN-write protected for it to work). After a short time, the 'Welcome to Macintosh' message will appear, and then the menu bar with the Apple Logo, File, Edit, View, and Special headings. The top right disk icon represents where the current System and Finder files are that are being used. If you want to use System and Finder in a ramdisk or on another disk, just open that disk and hold down the control and alternate keys while you double-click on the Finder that is on that disk.

The Mac desktop is a lot like the ST, but there are a few things that should be noted. Name your Magic disks. To do that just click on the name under the icon and type in a new name and hit return. The reason for naming disks is the fact there could be a lot of disk swapping for Mac programs (unless you use a ramdisk), and it is easier to keep track of what disk to insert, when to insert it, etc.

Get used to hitting 'Control e' before you eject any Magic disk. (The menu item could also be used to eject a disk, but this method might be easier.) It is safe to take out the disk when the flashing "A" appears. Learning this 'Control e' business is quite important. It could save you many trashed disks if you learn it early in the game. The Mac updates a lot of information just before the disk is ejected.

Another thing to keep in mind when in the Mac mode is the fact once you move or copy a file, it is moved and/or copied. It is not like GEM where a file can exist inside AND outside a folder. The newer HFS file structure for the Mac, however, is more like GEM that we ST-users are used to.

One final point. On the Mac, many options are not made available in an application (program) unless other features are first highlighted. If something doesn't appear to work, try highlighting something in a menu or dialog and see if it doesn't turn on other options.

Mac programs are a lot of fun to run on the ST. The fonts for the various word-processing programs are quite well-done and numerous. Some games exist as well as utilities and many desk accessories. The Font D/A mover program will help install or remove the fonts and accessories you want in the system file at that moment.

Stuffit 1.40 is a program that will uncompress files with .sit or .pit endings that you download with a modem. It is similar to arc for the ST.

If you are a GEnie subscriber, you might want to log on to the DP roundtable and check Dave's progress with the new Sac in category 2, topic 30.

Happy Magic-Sac'ing!

****

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WANTED TO BUY: Speech synthesizer for an 8-Bit Atari computer (I have an 800XL). Please call Andrew Rohr at 536-9256 (Tacoma).

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(This ST' "Bumbler" Could Use A Little HELP!)

By S*P*A*C*E'd-Out Bob Bomb Brim

In the ST BOMBATHON I'm reasonably proficient in getting three firecrackers, four blasters or ten exploders without half trying. But according to Darryl May, in the GEMINI 1988 issue of CURRENT NOTES [Vol.8 No.5], a skilled bumbler can get up to 66 GEM error codes and up to 255 bombs from the 68000 micro-processor! Darryl listed the GEM error codes and micro-processor bomb information. E.g., bombs #64 through #255 are "User Interupt Vectors". So there are many more mazes to explore before I can qualify as a bombardier. One bombardier told me that if purple hearts were awarded for bomb fragment wounds, he'd have enough ribbons to make a hospital gown, with enough left over to cover his exposed backside.

I would like to give some of the credit for my mediocre proficiency to those who have much better ability for scrambling 0's and 1's into technical 'language' for computer systems than they have for arranging the 26 letters of the English alphabet into comprehensible language for instructing unskilled computer users.

Other ants at the picnic are those TXT and DOC files which print with no spaces between words. My attention span for deciphering them is something less than two lines. One such file is the 36K UIS_II.DOC for the UNIVERSAL ITEM SELECTOR, the "can't-live-without" program extolled by Carolyn Caine, George Terpening, et al. *[See Carolyn's review of the UIS in the July 1988 issue of PSAN].* I feel deprived because I'm having to live without being able to make the UIS perform. "When all else fails, read the instructions". In an attempt to make the UIS_II.DOC readable, I transferred the file to ST WRITER. The LOAD command responded with the encouraging message "Converting non-ST Writer file". The EDIT command displayed the DOC on the screen with red thingybobs between the words and scads of other red thingybobs all over the screen. The PRINT command introduced some instructions which were not familiar, so I fumbled with the added options until the printer started to zing dots into matrixes. The resulting printout did not have spaces between the words, all words were severely condensed and the degree of shrinkage was different for adjacent words. Readability was no better, if not worse, than the original printout. The next experiment was to transfer the UIS_II.DOC file to FIRST WORD. The loading and display were normal, with no extra monkey motion. The format on the screen was perfect, with spaced words and no red thingybobs. The printout had four words scattered on the first page, four words on the second page, four on the third ----; the words were very readable.

Now we're getting closer to a point I'm trying to make, if we can find one. I've had the 1040 ST for over a year. I can fire it up, set the clock-calendar and desk top preferences, and adjust the volume control. I can even get some useful returns from ST WRITER; FIRST WORD; ATHENA II; and EASY DRAW, but can't claim to have mastered any of them. With EASY DRAW I'm still trying to reap the benefits of SUPERCHARGER and EASY-TOOLS. For fun, my four year old grandaughter coaches me on NEOCHROME, and we play some of the public domain kid games. This level of accomplishment might be more acceptable if I didn't attend user group meetings and read PSAN, BYTE, and other personal computer propaganda. My growing wish list includes a Modem, a Hard Drive, a Digitizer, a Magic Sac, a Translator, 4 megabytes, MIDI goodies and a Transputer (whatever that is). But it is pointless to seriously covet any of those things until I have more proficiency in using my current equipment. At age fifty nineteen I would like to learn more new tricks before becoming an old dog.

A large measure of the pleasure and rewards in having a computer is the challenge of showing it who's boss. A recent triumph occured when I discovered why some of my drawings would not print from ATHENA II, Version 1.9. This version will not print if any of the lines in the drawing are wider than single pixel thickness. Earlier versions of ATHENA II did not have this quirk. Mike Bird has been alerted. However, there are too many times when "all else fails", including the @*$*#*&*!*? "instructions". This tear gas is not sprayed toward ATHENA II, which is my favorite CAD program with a well written updated manual.

The point we are looking for is coming into focus. When I chase my mouse into a big black bottomless echo chamber, what resources are available for rescuing me? For providing maze maps and illumination? For answering bumbler stumper questions? Not the occasional quicksand querys which can be resolved during shop talk at S*P*A*C*E meetings, but the HERE AND NOW BOOTED PROGRAM BUMBLER STUMPERS.

My telescope is focusing on a humongous UFO hovering over Mt. Tacoma. Behold! A brilliant vision is materializing. A pulsating beam is flashing a message in bumbler code. "C*A*L*L Y*O*U*R N*E*A*R*E*S*T B*A*S*G -- B*U*M*B*L*E*R*S A*N*O*N*Y*M*O*U*S S*U*P*P*O*R*T G*R*O*U*P -- A*N*Y H*O*U*R O*F T*H*E D*A*Y O*R N*I*G*H*T" Eureka! Can any of you out there give me B*A*S*G's phone number?

****

HEY, WE'VE MOVED!

STARBASE will now meet in the "NEW" Mountlake Terrace Library at 23300 58th Avenue West.

To get us all acquainted with our "NEW" surroundings, we'll hold our

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SEE YOU THERE!

Projections (continued...)

On the other hand this next senario could be the way things will be. The government will not remove the tariff from semiconductors and Atari will not open their US production plant. As officials of the company have stated, DRAMS cost to much to produce computers in this country as conditions now stand. Atari will not do ANY advertising for the ST line with no increased production to back it up. They will continue to advertise the game machines as they are now doing in SELECTED markets (such as LA and New York). As the game machines continue to sell well and with little or no ST advertising and with the current ST prices the Amiga and the PC clones with their current low prices will continue to take the market that the ST just last year was starting to take control of. By the way how are the others producing those computers in quantities if the productions costs are so high? Atari will continue to produce the ST for the hot European market as they now do and nearly all new software for the ST will come from Europe since software producers look at computers as I stated before. The Atari will not be a major force on the computer scene and will regain the game machine image that Atari has been fighting with the new management.

If the first senario comes true, then everything will be fine and there will be lots of support for the ST in the future. If the second comes true, then the Atari that we know and love will fade from the american scene. Atari will still prosper, but only in the European area. We will be forced back into the Amiga, Mac or the IBM worlds if we want to keep up with the latest advances in the computer world. It will be an interesting year to watch and see what happens.

****

EVERYTHING YOU EVER WANTED TO KNOW ABOUT GDOS (AND MORE)

ST Tutorial by Douglas N. Wheeler
(Reprinted by permission of the author)

What is GDOS?

GDOS is an extension to GEM which adds new capabilities to your ST. Originally, GDOS was intended to be an integral part of GEM, but due to time restraints, had to be left out. Atari is now offering GDOS to registered developers at a cost of $500 per application using GDOS (it doesn't cost anything to look, except for the cost of becoming a developer).

The three primary new capabilities are:

1. The ability to use multiple fonts in various point sizes on the screen, printer, and other output devices.

2. Allows the creation of metafiles, which are standardized files intended to be useable by many different applications. This allows files created in one file to be useable in another.

3. Support for various output devices with resolutions up to 32,767 x 32,767 (including emulation of this resolution on the screen). This allows graphics to be printed at the highest resolution of the output device.

How to use GDOS

In theory, using GDOS is as simple as putting GDOS.PRG in your AUTO folder and booting the computer. In practice, though, a series of conditions must be met. The most important of these conditions is that there must be a valid **ASSIGN.SYS** file present in the root directory of the boot disk.

The following is a typical ASSIGN.SYS file.

```
PATH=C:\GDOS.SYS
;
01p SCREEN.SYS  ; default screen
;
02p SCREEN.SYS ; low resolution
ATSS10.FNT      ; fonts
ATSS12.FNT
ATSS18.FNT
ATSS24.FNT
ATTP10.FNT
ATTR10.FNT
ATTR12.FNT
ATTR18.FNT
ATTR24.FNT
;
03p SCREEN.SYS ;med resolution
ATSS10CG.FNT
ATSS12CG.FNT
ATSS18CG.FNT
ATSS24CG.FNT
ATTP10CG.FNT
ATTR10CG.FNT
ATTR12CG.FNT
ATTR18CG.FNT
ATTR24CG.FNT
;
04p SCREEN.SYS ;high resolution
ATSS10.FNT
ATSS12.FNT
ATSS18.FNT
ATSS24.FNT
ATTP10.FNT
ATTR10.FNT
ATTR12.FNT
ATTR18.FNT
ATTR24.FNT
;
21 FX80.SYS ;Epson 9-pin printer
ATSS10EP.FNT
ATSS12EP.FNT
ATSS18EP.FNT
ATSS24EP.FNT
ATTP10EP.FNT
ATTR10EP.FNT
ATTR12EP.FNT
ATTR18EP.FNT
ATTR24EP.FNT
;
31r META.SYS ; metafile driver
ATSS10MF.FNT
ATSS12MF.FNT
ATSS18MF.FNT
ATSS24MF.FNT
ATTP10MF.FNT
ATTR10MF.FNT
ATTR12MF.FNT
ATTR18MF.FNT
ATTR24MF.FNT
```

As you can see, I have divided the file into distinct groups. The first line of the ASSIGN.SYS file is use to tell GDOS where the fonts and device drivers are located. This line must always start with **PATH=** which is followed by a pathname of up to 64 characters locating the fonts and drivers.

Following the path identifying line is the list of device drivers and their associated fonts. Each group is composed of four parts. First is a number representing the type of device:

01-10	Screen drivers
11-20	Plotter drivers
21-30	Printer drivers
31-40	Metafile drivers

The Atari has four built-in device drivers, they are:

01	Default screen (used when an application doesn't care about the screen resolution)
02	Low resolution screen
03	Medium resolution screen
04	High resolution screen

Immediately following the device number may be a "**load flag**" of either "**p**" or "**r**". A "**p**" indicates that the device driver is "**p**"ermanent and does not need to be loaded by GDOS. Because the ST has it's screen drivers built into ROM, there will be a "p" after devices 01-04. An "**r**" indicates that the device driver should be kept "**r**"esident, causing GDOS to load the device driver immediately. If a load flag is not present, GDOS will only load the device driver when an application opens (accesses) that device.

After the device number and load flag is the filename of the device driver as it appears in the disk directory. In the case of ROM-resident drivers, the filename is only a place-holder (but must be present). Keep in mind that the device driver must be in the folder specified in the path line. On the lines following those three items is a list of fonts associated with that device (again, these are the filenames as they appear in the indicated path of the disk).

You may have noticed a few lines with semicolons (;) in them. GDOS will treat any text on a line to the right of a semicolon as a comment and will ignore it.

Editing/Creating ASSIGN.SYS

Now, why would you want to change your ASSIGN.SYS file? Well, if you have just one program which uses GDOS, and you are happy with the fonts you have, then there is no reason to change it. But, now that GDOS is beginning to be accepted on the ST, many of us are acquiring a collection of GDOS applications and fonts. By editing or creating a new ASSIGN.SYS, you could create a "universal" ASSIGN.SYS and font/driver folder to be used with all of these programs!

Luckily, the ASSIGN.SYS file is a standard text (ASCII) file which may be edited with most text editors and word processors. The only requirement is that the file not contain any formatting codes. This can usually be accomplished in a word processor by turning document mode off, or selecting "Save as text" (check your word processor manual for exact instructions for doing this). If you are using a text editor, such as MicroEmacs or Tempus, all you have to do is save the file.

Starting at the top, the first thing you may want to change is the **PATH=** line at the beginning of the

(Continued on Page 19...)

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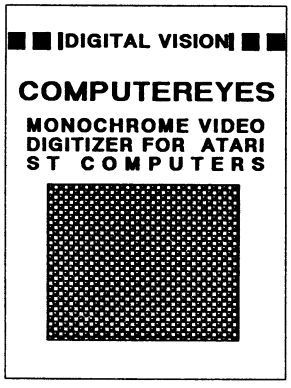

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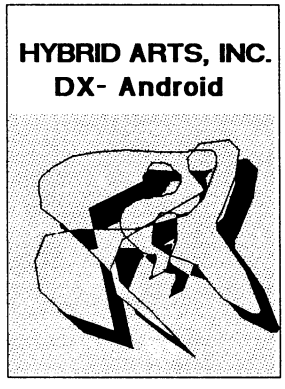

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Everything You Wanted To Know About GDOS (cont.)

ASSIGN.SYS file. By changing this line, you can put your fonts and printer drivers on another disk or hard drive partition (instead of your boot disk). If you are using floppies, keep in mind that this directory (folder) must be present when an application accesses any of the GDOS devices. Also, to speed booting, this directory should be present when GDOS is loaded.

Below is a list of my recommended configurations based on what arrangement of disk drives is being used.

One floppy drive:
- Boot disk (drive A) with:
  - AUTO folder containing GDOS.PRG
  - GDOS.SYS folder containing the fonts and drivers
  - ASSIGN.SYS with PATH=A:\GDOS.SYS
  - Any GDOS application(s) (you may wish to create separate boot disks for each GDOS application)

Two floppy drives:
- Boot disk (drive A) with:
  - AUTO folder containing GDOS.PRG
  - ASSIGN.SYS with PATH=B:\GDOS.SYS
- Font/driver disk (drive B) with:
  - GDOS.SYS folder containing fonts and drivers
- Application disk (drive A after booting GDOS) with:
  - Any GDOS application(s) (you may wish to create separate application disks for each GDOS application)

Hard drive (booting from floppy):
- Boot disk (drive A) with:
  - AUTO folder containing hard drive boot program and GDOS.PRG
  - ASSIGN.SYS with PATH=C:\GDOS.SYS
- Hard drive partition C with:
  - GDOS.SYS folder containing fonts and drivers
- Any hard drive partition with:
  - Any GDOS application(s) (may be on any partition)

Hard drive (autobooting):
- Hard drive partition C with:
  - AUTO folder containing GDOS.PRG
  - GDOS.SYS folder containing fonts and drivers
  - ASSIGN.SYS with PATH=C:\GDOS.SYS
- Any hard drive partition with:
  - Any GDOS application(s) (may be on any partition)

Of course, these are only suggestions, and other configurations may be better for different applications. Hopefully you should now be able to create other set-ups without too much difficulty. There are a few "musts" that have to be observed:

1. GDOS.PRG must be in the AUTO folder of the boot disk.
2. ASSIGN.SYS must be in the root directory of the boot disk.
3. The **PATH=** line in the ASSIGN.SYS file must contain the complete pathname of the folder containing the fonts and drivers.
4. The fonts and drivers must be in the right place when an application or tries to open a device.

A Bit About Fonts

One question about GDOS fonts that people ask is, "when are the fonts loaded?" Many people are under the impression that all the fonts are loaded when GDOS is initially loaded. This is not true (and cannot be done). An "r" load flag in the ASSIGN.SYS file will cause GDOS to load only the device driver, not the fonts. Fonts are loaded only after an application opens a device and asks for the fonts to be loaded. At that time, GDOS will attempt to load all the fonts for that device. If there is an error (can't find the file, not enough memory, etc.) GDOS will skip over that font and continue with the next one. When an application is through with the fonts, it can "unload" the fonts to free up that memory.

Another fact that many people don't understand is that the font filename is irrelevant to GDOS. Each font has a "header" consisting of various parameters, some of these are: point size, font name, and a font ID which is used to identify fonts of the same type (i.e. all swiss fonts have the same ID). Another thing to note is that GDOS does not handle line spacing, this is handled by the application regardless of the actual size of a given font. Some programs use the point size to determine line spacing, and others use the actual height of the font (yes, the point size can be set different from the actual size).

For those of you creating your own fonts (with GEMFED or FONTZ!), you must assign a unique font ID (from 0 to 32,767) to each of your fonts, and all font of the same type (i.e. Times), but of different size, must have the same ID. Another thing you must know when creating your own fonts, is the resolution of the devices you are creating the fonts for. The following is a list of most of the currently available devices and their resolution.

Low resolution screen	45 x 45 (horizontal dpi x vertical dpi)
Medium resolution screen	90 x 45
High resolution screen	90 x 90
9-pin dot-matrix printer	120 x 144
24-pin printer	180 x 180 or 360 x 360 (NEC P-series only)
Laser printer	150 x 150 (some) or 300 x 300

As you can see, most of these devices have square (round) pixels. This allows for sideways printing using the same fonts as for vertical (normal) printing. A notable exception to this is with the 9-pin dot-matrix printers, which will distort characters when printing them sideways. Different drivers (from different companies) handle this problem differently: they either ignore the fact (and print distorted characters sideways), or they print the left and right sides of a horizontal page on two separate vertical pages, which must then be taped together. The first method is the easier (and faster) of the two, but the second method will produce correct characters, and the taping isn't too bad if you are going to photocopy the final product.

It would be possible to create separate fonts for sideways printing, but so far this has not been done. Also, Epson printers (and 100% compatibles) have a 144 x 144 dpi (double plotter) mode which could be utilized. This would not only allow non-distorted sideways printing, but offers slightly higher resolution in the horizontal axis.

Font Filenames

As I stated earlier, font filenames are not used by GDOS, but to us humans, consistant filenames can greatly simplify things. With the official release of GDOS (late last year), Atari adopted a standardized way of naming font files. Here I will explain Atari's idea and add a few extensions.

A font filename like **ATSS10EP.FNT** may look meaningless to someone who doesn't know how the filename was derived, but is, in fact, very functional.

The first and second characters (**AT**) indicates the creator/distributor of the font (in this case Atari).

(Continued...)

Everything You Wanted To Know About GDOS (cont.)

has suggested that these characters be "AT" for all fonts used on the Atari, this seems meaningless to me, as I don't have any fonts for any other computers on my ST disks. (Why would I?) I feel these two characters can be put to better use to specify the creator/distributor.

The third and fourth characters (**SS**) identify the typestyle (in this case Sans Serif). These should be unique to a particular rendition of a specific typeface.

The fifth and sixth characters (**10**) specify the point size of the font. This should be the point size as printed on the device the font was designed for, not the pixel height. Also, sizes less than 10 should have a leading zero (i.e. 06) to maintain the overall structure.

The seventh and eighth characters (**EP**) specify the device for which the font was designed (in this case the Epson 9-pin driver). If there are no seventh and eighth characters, the font is assumed to be for the high-resolution screen. The filename extender on all fonts will be **.FNT**.

Although not many companies/individuals have produced fonts for the ST (yet), I recommend that all font filenames follow this convention to avoid confusion. I also suggest a few standard identifiers:

Creator/distributor:
- AT - Atari
- MG - Migraph
- TW - Timeworks
- NC - Neocept

Typestyles:
- SS - Sans Serif (Atari's Swiss)
- TR - Times Roman (Atari's Dutch)
- TP - Typewriter (Atari)
- DB - Dingbats (Timeworks' Bullets)
- DL - Drury Lane (Timeworks)
- MA - Madison (Timeworks)
- RK - Rockface (Timeworks)
- RA - Ravinia (Timeworks)
- CL - Camelot (Neocept)

Device:
- MG (or none) - Monochrome graphics (high/low resolution screen)
- CG - Color graphics (medium resolution screen)
- EP - Epson 9-pin dot-matrix prnter (120 x 144)
- NB - Star NB-24 24-pin dot-matrix printer (180 x 180)
- NC - NEC C-series 24-pin dot-matrix printer (360 x 360)
- LL - low resolution laser printer (150 x 150)
- LS - standard laser printer (300 x 300)

In many cases, the creator/distributor is not important, in which case the first four characters can be used for the typestyle. You will also notice that I have listed typestyles from various companies, I have done this because I recommend that you rename all of the font you currently have to match the above conventions, this will save you a lot of confusion in the future when you may have ten times as many fonts.

One thing to note if you create a master ASSIGN.SYS file, is that although the Timeworks Swiss and Dutch fonts are different from Atari's, they use the same font IDs. GDOS could get very confused if you have two fonts with the same ID and point size. My personal recommendation is to replace Timeworks' Swiss and Dutch fonts in the 10, 12, 18, and 24 point sizes with the ones from Atari, as I feel these are much more professional and true to the original Helvetica and Times Roman typefaces.

Metafiles

Metafiles are (in theory) ideal files which can be exchanged between different GDOS applications. Metafiles are those files with a .GEM extender. Metafiles are "ideal" in the respect that they are resolution independent. They are simply instructions for the computer to recreate a page on any output device at that device's highest resolution. This is accomplished by storing commands for drawing lines, circles, rectangles, text, etc., unlike most picture files (.NEO, PI?, etc.) whitch store the dots making up an image.

Unfortunately, metafiles are not 100% standard yet. This results in programs not being able to read metafiles created by another application. Technically, the fault lies with the program trying to load the metafile, not the creator. Many different parameters may be present in the header of a metafile, but only a few of these are required. Unfortunately, many applications expect some of the optional parameters to be there and can't load the file correctly if they don't exist. Currently Easy-Draw (version 2.3) is the most capable of the available GDOS applications, and can read just about any metafile.

Some of the more recent GDOS applications are allowing the use of GEM image files (those ending in .IMG). These are bit-mapped images similar to those created by the various ST paint programs (but without the screen size and resolution limitations). As is the case with other paint files, these images may be jagged or blocky when printed on a high resolution device.

A very important fact about images in metafiles is that the metafile does not actually contain a copy of the image. The metafile only contains the filename of the image on disk. This means that you must not remove the disk containing an image while the metafile is being printed, and everytime you print that metafile, the image must be in the same disk (or you will have to change your file). If GDOS can't find the image, it will just skip over it. Be warned.

Miscellaneous Comments

If you are using the Timeworks Desktop Publisher ST (TDTP), you must run the FONTWID.APP program each time you modify the ASSIGN.SYS file. Another important fact is that the relative widths of the Timeworks fonts are not the same for different devices. What this means is that if you create a document with TDTP installed for use with an Epson 9-pin printer, then load the file into TDTP installed for use with a laser printer, the text will be re-flowed. This may result in different column breaks, lost text, extra white space, etc. The best solution to this problem is to create the document with a TDTP installed for the device which will create the final copy. Another idea is to use Atari's fonts (if you have them, they are not public domain), as the relative sizes between devices is very close (there still may be a few differences, but can be fixed readily).

For those of you who have seen a lot of DEGAS Elite GDOS fonts floating around, don't get too excited. For those to print properly (even blocky), you must have matching printer fonts for the screen fonts. GEMFED or FONTZ! greatly simplify this process, but if you intend to create a complete set of fonts in four or five sizes, you will have a lot of work ahead of you.

Anyone creating fonts for the general public (either commercial or PD), try to remember that not everyone is using the same kind of monitor or printer you are. If at all possible, create fonts for all the devices I have listed above.

Another thing I didn't mention are metafile fonts. These are not really fonts, but merely width tables designed to keep correct character spacing in a file when used with different GDOS applications. In most cases, you can eliminate metefile fonts without any loss of quality.

(Continued at bottom of next page...)

DropZone!

Arcade Action For The Atari 8-Bit!

Reviewed by T. Johnson

(Reprinted from the MilAtari Newsletter via the Roughwriter)

For some unknown reason, you've decided to make your home on a planet occupied by a bunch of helpless little wimps. Until now, the galaxy has been a peaceful place to live. However, some of your alien neighbors have decided to do you and your friends in. Unable to defend themselves, guess who has been elected to save the planet and its people. Yup, that's right! None other than the new kid on the block, YOU!

Now, this isn't going to be easy. The aliens come in eight different varieties ranging from Androids and Anti-Matter to Nemesites and Nmeyes. Sure, you were introduced to them in the title screen, at boot up, but there's going to be little time to recognize them as they try to make star dust out of you in wave after deadly wave of assaults.

Being the hero and that you are, you accept the challenge and proceed to do battle with only a few weapons to aid you. But, choice weapons they are. First there's the jet pack on your back. Next, there's the ever present gun. These two dandy items have one thing in common. They never run out of fuel or ammo.

Now, I'll tell you about the good stuff. These two weapons are the things that make you feel like you have a chance. First, there's the almighty bomb. It's capable of destroying everything on the screen, except you, of course. To use it, you simply hit the space bar and watch the fireworks. Second, you have the option to use the cloaking device. Use any key to activate or de-activate it. This makes you invisible to the enemy. But, like all good things, there's a limit to how much you can have of them. You start with only three bombs, and lives, and are awarded only one of each every 10,000 points scored. As for the cloak, it's only partially replenished when completing a wave of alien attacks.

If this game sounds like Defender that's because it is very similar to it. In fact, if you've played Defender, it won't take you long to learn how to play it. Don't get me wrong. This doesn't make it bad or boring, just original.

(Continued on Page 22...)

Everything You Wanted To Know About GDOS (cont.)

Glossary

Device (Graphics Device) - Anything used to create some form of output, usually on a video screen or printed on paper or film.

Device Driver - A computer program used to control a device as specified by a "master" application.

Font - A typeface of a given style and point size.

GDOS - Graphics Device Operating System; an extension to the Atari ST's operating system allowing for the use of various fonts and graphics devices.

GEM - Graphics Environment Manager; the portion of the ST's operating system which is responsible for most of the visual aspects of the ST.

Header - A portion of a file (usually at the beginning) containing various parameters describing the file.

Line Spacing - The distance between successive line of text, usually measured in points.

Pixel - Picture element; a single dot, usually one of many used to create a complete image on a video screen or printed on paper or film.

Point - A typographical unit of measure; approximately 1/72".

ULTIMA III And IV

Adventure For The ST

Reviewed by Thud Rooter, STARBASE

I've beaten Dungeon Master and am getting close in Alternate Reality and Bard's Tale, but I really needed something new to play. So after cruising the local stores and the mail order ads, I picked up a new game for the ST that I had almost beaten on the 8-bit - ULTIMA IV.

If you played it on the 8-bit you know that it takes forever, but it is worth it because, like it's aforementioned descendants, it combines a lot of different elements into one game system.

It can be played as a pure hack and slash game where you slowly put together your party and go out and keep bashing and dying until you can walk over anything in your path.

Or it can be played the way it was intended, as a complex mystery puzzle that requires a lot of effort and note taking to solve.

In my view it is more difficult than either Dungeon Master or Alternate Reality and has far more complexity than Bard's Tale. The graphics for the maps are virtually the same as the 8-bit version, but the colors and details are richer and the tunnels in the dungeons were redone very nicely.

I'd spent a lot of time in the 8-bitter learning. And then about half way through, I was given a good set of maps and other information. I had over a million turns registered in the quit function.

I restarted two days before the deadline for this issue and my turns are up to 6 digits. But I am playing a smarter game this time.

I also looked at Ultima III and everything I have said about IV applies there, too. I have also seen II in the store, but have heard it isn't nearly as complex. I can remember when I first started modeming everyone discussing the Ultimas in the message bases and trying to figure out things like: why horses wouldn't go into dungeons (they're too smart!), and how to fly the ballons.

If you are a recent Atari convert and liked DM, AR and BT and somehow missed the Ultimas go out and grab one. It will keep you busy for a month or two. *And I have good notes.*

Thud says play it again, Al.

****

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Any questions or comments about this document can be directed to me: Douglas N. Wheeler, PSC 3 Box 6096, Travis AFB, CA 94535. Ph: (707) 437-3786. GEnie: D.N.WHEELER

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DISK SWAPPER

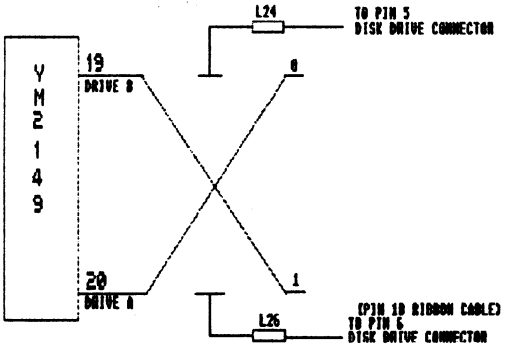
An ST "Do-It-Yourself" Hardware Mod

By Ken Kirkpatrick & Keith MacNutt, T.R.A.C.E.

This mod allows you to swap boot drives or to swap drives inside programs. For anyone who runs PC-Ditto this mod will now allow you to boot directly from your 5 1/4 inch drive.

The only parts you will need will be a dpdt switch with a rating of 5 volts and handle at least 1/4 amp of current.

This mod should not be attempted by anyone that does not have some electronic and soldering experience. Since some of the components are under the RF shield this mod will take a few hours to complete. The computer must be disassemble-assembled down to the mother board. To start all power and signal cables should be disconnected along with the mouse and joystick. Next remove the screws on the bottom of the computer. Take of the top cover and remove the keyboard. Disconnect the drive insuring that both the 34 pin and 4 pin cables are removed. Next remove the RF shield and now you should be left with a mother board inside the bottom case of the computer. Locate the disk drive connector (14 pin) on the back of the computer. In front of an to the right you will find a row of inductors that look like resistors standing upright. Find L24 and L26. These both should be de-soldered on the end that is closer to you. This will leave you with two inductors that are standing up right with one end unsoldered. The next step should be done very carefully. Solder a thin wire into each of the holes where the inductor end used to be. You may find that you may have to remove the mother board from the case and solder the wires from the bottom. If you do it this way you must first remove the metal shield from the mother board. Next solder a thin wire to each of the inductor ends. Solder two wires on the dpdt switch so that they run criss-cross from one end to the other. Now attach the wires that are running from the inductors to the middle connections on the switch. Attach the wires from the mother board to one end of the switch, this should switch drive select leads back and forth when the switch is thrown.



To test to see if this mod works insert a disk into both drives and toggle each drive at boot up to see if one then the other drive responses. The mod has been running on a 520STfm for seven months and on a 1040ST for at least three months with no trouble. The only drawback is that when you cold boot from the external drive you can corrupt your disk. I have found that if you write protect the disk you will have no problems. This problem only happens on some cold boots and has never happened on a warm start. Part of the problem is that if you have selected the external drive to boot from when you turn the power off to do a cold start the external drive starts whirling and somehow corrupts the boot sector. Other than this, the mod has worked flawlessly.

****

CAPTAIN BLOOD

Review of "The Docs"

By Steve Weber, STARBASE/Cave Creek

"35 Cents? Only 35 cents in royalties to live on for the next 3 months? I've got to program a major hit soon."

So it begins, the start of a long programing ordeal for one Bob Morlok, living somewhere in the near future, trying to eke out a marginal living programing games that hopefully, people will buy so he can continue to crank out newer and better things.

Yep, we finally received the graphically stunning game Captain Blood, which comes from France with two booklets and even a poster. The documentation is broken up into a novelette and an operations manual. The novelette is the most enjoyable of the two, but the tech manual is a nice thing to have around when coming into contact with various races found in the galaxy.

Apparently Bob Morlok is well known for his game prowess and programing skills under the pseudonym BLOOD, which inspires great awe in some kids that challenge him to a video game contest, which they of course, lose. As Bob leaves the club he meets a man who is a famous "Bio-whatever" (direct quote) living incognito on the streets of the city. After a short conversation the man informs Bob that yes there are indeed aliens in the galaxy, they look like pac mans. This serves to inspire Bob to program the ultimate Bio-game and he rushes home to start work.

Six Months later Bob has built up a space vehicle in his computer, an ark complete with bio-consciousness. The mission is to fight evil all across the galaxy. After all this time the moment draws near, he types "Run" into the computer. WHOA! What's this! Bob has been sucked into the program and is now Captain Blood, a biological-robot type creature, and the adventure begins.

The story is fairly well written, but at times character development could have been more strong and some of the dialogue could have been a little less pseudo-techie. There are clues for the game, hidden is the story, which help to prepare for playing one of the best semi-new games for the ST.

All in all this is a pretty good document package and worth every penny spent. In fact they even include some disks in the box with a copy of the program in English, what more could one want?

****

Drop Zone (continued...)

The graphics and sound are second to none. Especially when you get blown to pieces. I have to admit that I wasted several men, when I first purchased the game, just to watch the show. Little did I know how often I'd be watching that colorful exhibit!

My only complaint with the game is that it's very difficult to play. This game will definitely challenge the best arcade players.

****

DEAR CHIP
The "New Age" Advisor!

Dear Chip,

Me and da misses was thinkin about goin' to this here Starbase auction. (I took his every word right from my record-a-call. Really!) She thinks we can find bargins there, just like at a swap meet or garage sale. I had to laugh. I told her these is computer people, not your average home owners. We don't need no pocket pen protectors or old bi-focals. We wants good stuff, like old "Oly" beer signs and valve covers for the 4x4.

Ever since we bought the kids one of them Atari STs, she's been buggin' me. First she wanted me to learn how to use the thing. What's an intelligent guy like me need to do something stupid like that for? Next she says me and the kids can spend quality time together playing games, doin' homework or planning the family budget. I ask you, is she jacking me?

Chipper, you knows me well. We go back along ways. If you think she's right and I'm wrong, so be it. But remember, I saw you with that good looking blond when your wife was out of town. You make the call.

Tucker from Tacoma

Dear Tucker,

First of all, don't call me "Chipper." I HATE it! Secondly, that was my cousin you saw me with. We often go dancing when my wife is out of town. So there!

Yes, I do know you well. Well enough to say you better be at that auction. You're so tight, you squeak. How you ever afforded the computer in the first place is a mystery. (You cut them tall green plants down around your place yet?) You'll find some of the best deals in town at this year's auction. At least that's what I've been told. Why, I plan on being there myself! A guy like you can stock up on lots of good deals. Call "Big Al" and ask him if you don't believe me!

Yes, you should learn how the use the ST. I know you think taking the kids to a beer garden is quality time. Have Loretta buy you a sixer of Rheinlander and stay home and play with the computer. The guys down at Lucky's won't miss you for one night.

As far as that crack about pocket pen protectors goes, what do you think computer people are, nerds? I've never seen anyone at any of the meetings I've attended with one of those things. Thick glasses are another story.

Lastly, what do you need another beer sign for and don't you have enough valve covers for that 4x4? Your electric bill must be something else. How do you sleep with them on? Halide beer signs. What will they think of next!

Your Basic Family Man,
Chip

****

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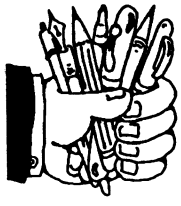

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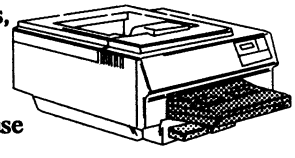

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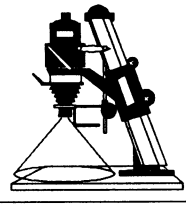

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HARDWARE - TIDBITS

8-Bit and ST "Mod" Tips for Do-It-Yourself'ers

By Rich Gratzer, S*P*A*C*E

8-BIT MIDI INTERFACE *Revisited*

OOPS! In the March '88 PSAN on page 26 *(BUILD YOUR OWN MIDI INTERFACE)*, you will find a mistake on the MIDI Activity Indicator circuits. The schematic below (Figure A) is the correct circuit. I've drawn it a little bit nicer so it should be easier to follow. I had lots of room to draw it this time! Be sure to use the proper logic families shown on the schematics for all of the MIDI circuits; 74HCxx or 74HCTxx logic families are acceptable. Some people have had trouble when using a CD4024 CMOS IC in place of the 74HC4024. Unfortunately, the older CD4024 only guarantees operation with clock frequencies up to 1.5 MHz and may or may not perform adequately above that limit. Also, if you're having trouble finding 2MHz clock chips you have the option to substitute 4, 8, or 16MHz cco's in place of the 2 MHz part. The 74HC4024 is spec'd at 24MHz min. at 4.5 volt operation ... just Ducky! Now all we have to do is hook up the RXclk and TXclk (pins 3 and 4 on the 68B50) to an output pin on the 74HC4024 as follows. 4MHz - pin 9 out, 8MHz - pin 6 out, 16MHz - pin 5 out. The object is to provide the ACIA with a 500KHz clock input which it divides by 16 to achieve the proper MIDI baud rate of 31.25KHz. If this confuses you just give me a call!

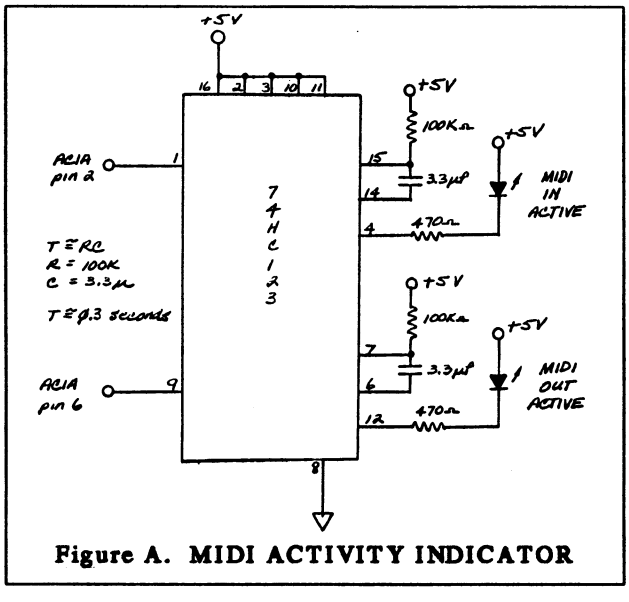

Figure A. MIDI ACTIVITY INDICATOR

YAMAHA / GI OUTPUT-BUFFER CIRCUIT

Here's a quick little circuit that may solve some problems for ATARI ST owners. See the circuit in Figure B. Rumor has it that many of you are having a tough time trying to get the YAMAHA / GI sound chip to adequately drive some of your peripherals, namely Disk Drives and Printers. Well, the problem is really simple. The sound chip outputs are capable of sinking approximately 1.6 millamps (ma.) and sourcing only 40 microamps (ua.). These output current limits should not be exceeded. So what happens if the input circuit of your Printer or Disk Drive requires more current than the sound chip can deliver? Well, a number of things could happen. Operation could be intermittent or flakey, or things might work fine for a while even though the output stage of the IC is being violated and degraded. Worst of all is the possibility of destroying the IC! They're a 'Real Bear' to replace, especially since they're soldered to the circuit board. That's right, no socket, truly ... "Power Without the Parts"?! Anyway, the fix is simple! Figure B shows a 74HCT244 octal buffer. This IC requires only 1 ua. of current for a hi or lo input and it also provides approximately 6.5 ma. of source or sink drive current to your Disk Drive or Printer as needed. If that's not enough output drive capability, then you'll want to get a 74ALS244. This IC will 'source' 24 ma. when the output is HI and 'sink' 24 ma. when the output is LO. If that's not enough, then you've got some other problem!

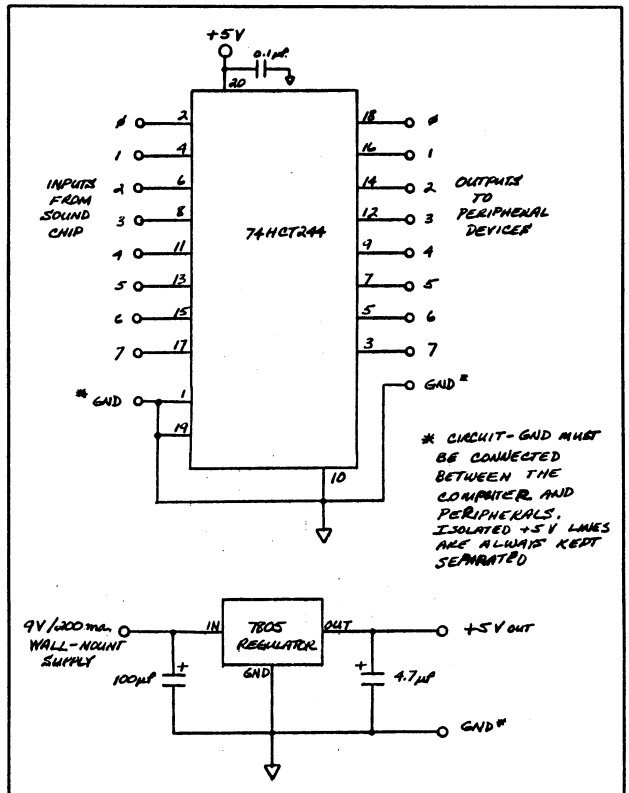

Figure B. OUTPUT BUFFER CIRCUIT

There are several other IC's which are adequate for driving your Peripherals, however, I selected the 74xxx244 partly because it has 8 drivers per chip and if you need to boost the output of the Centronics Port (Printer Port), then you'll most likely need 9 drivers for the Strobe and Data lines, and 1 for the Busy line. The Busy line is an Input with a 1K pull-up resistor to +5volts which increases the current sinking requirement of the printer 'BUSY' output to about 6.5ma. At that point you may as well add a buffer/driver and then you can be certain that the peripheral will be able to drive the computer adequately! The other reason why the '244' is a nice choice, is that the '74ALS' part has exceptional output current capability, much more than is typical for that logic family. If you need 'HI' current

(Continued...)

Hardware - Tidbits (continued...)

outputs, then the 74ALS244 is the way to go! However, the '74HCT' part is preferred when the output drive requirements are less stringent. The 'HCT' family of IC's has extremely low input current spec's. (easier on your Sound Chip!) and they also use significantly less quiescent-current while idle or at lower-frequency operation. Also shown in Figure B is a power supply circuit in the event that the IC's can't be mounted within the peripheral device where +5 volts is available. If you're attempting to boost the Sound Chip outputs to a Disk Drive, the lines that you'll need to buffer are: Side Select, Drive 0 Select, and Drive 1 Select. Again, if this is all too confusing, you can come to the Hardware SIG meetings and I'll be glad to give you a hand. Just give me a phone call in case I might need to bring along some data books!

RS232C to TTL TRANSLATOR CIRCUIT

Here it is, the RS232 interface that I promised a couple of club members several months ago! The circuit in Figure C is all it takes. The MAX232 chip is extremely easy to implement because it requires only a single +5 volt supply for complete operation. The chip is available at Jameco Electronics (Ph# (415) 592-8097) for approximately $5.00, but they do have a $20.00 minimum-order policy so you might pick up some other goodies when you go to order. You can also get data sheets for any device they sell (I think!) for about 50 cents.

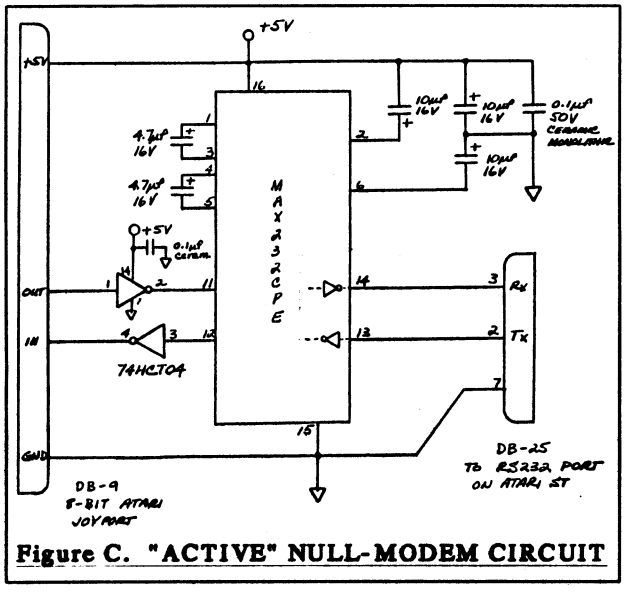

Figure C. "ACTIVE" NULL-MODEM CIRCUIT

I became involved with this RS232 interface stuff when a couple of club members called concerning problems they had with the two Null-Modem circuits that we're published in the PSAN Newsletter within about the last year or so...! These articles showed how to connect the 8-bit Atari joyport to the ST's RS232 port (Figure D) to enable file transfers between the two computers using some kind of terminal software with which I have absolutely no experience. The latter of the two articles looked like a copy of the original (but by a different author) and if so, had a mistake in the wire connections. When I say that the circuits in question were inadequately designed, I don't mean to offend or be-little the authors of these articles. I personally think the Atari community owes a great deal of thanks to them since they both contribute to several Newsletters on a regular basis. However, this case is a matter of 'Life and Death' to the 8-bit Atari's PIA chip. Heck, what's life without a little drama!?

The problem, with respect to the circuit in Figure D, is that RS232 signal levels are simply incompatible with TTL logic IC's. RS232 signal levels may range from + / - 3 to 25 volts and these signal levels must be limited or clamped to voltage levels within the specified input voltage range of the particular TTL logic family concerned. For most IC's the limits are tenths of volts above Vcc and below ground. There are a few specially designed chips that allow you to break the rules, however, your PIA chip is not one of them! Internally, TTL logic chips have protection diodes and isolation layers, which, when forward biased, cause several internal circuit elements to be short-circuited thus destroying the integrity of the circuit. Some logic families have a parasitic-latch structure which, when activated by excessive input voltages, attempts to short Vcc to Ground (Got some weenies and a stick ... !?). The amount of damage done to any particular IC will depend on the characteristics of the logic family, the actual physical layout of the internal components and substrates, and the magnitude of the over/under voltage and current in violation of the input limits. Similarly, TTL IC outputs are susceptible to the same damage and for the same reasons.

The circuit in Figure D is inappropriate on 3 counts. First, TTL outputs should not be used to drive RS232 inputs directly; second, the RS232 to TTL connection doesn't sufficiently limit negative voltage inputs (standard signal diodes forward voltage rating is too high ... use 1N5711's); third, the positive overvoltage is not clamped or limited externally. The internals of the IC will determine the + clamp voltage and the external resistor will only provide current limiting, which is probably what saved your PIA. Now obviously this simple circuit worked for some people, right? Otherwise, it wouldn't have appeared in our Newsletters! Well, fortunately, IC's don't always go 'poof' immediately. Some are very durable and under-rated and will last quite a while before degrading to the point of permanent failure. If you have built and used the simple circuit in Figure D and intend to continue swapping files between computers, then now is the time to build the Active Null-Modem circuit in Figure C. That's right ... "If it works, fix it!" Think of it as an inexpensive insurance policy! Believe me, if RS-232 Interface manufacturers could get away with using the circuit in Figure D they would, simply because it's so much cheaper to manufacture.

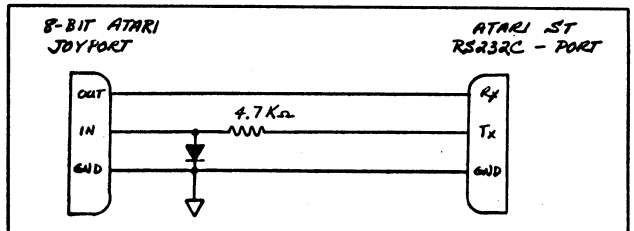

Figure D. NULL-MODEM CIRCUIT

Good luck on all of your hardware projects and remember to attend the S*P*A*C*E Hardware SIG meetings on the 4th Saturday of each month whether you're in need of some help or just looking for some fun!

Coming soon ..... A simple hardware mod for the Luminance-Circuit in your 8-bit machine. This modification will clean up those annoying shadows on your 1701 and 1702 monitors or any monitor with exceptionally sharp pictures and no Soft / Sharp adjustment.

****

LORDS OF CONQUEST

An 8-Bit Strategy Game

Reviewed by Penny Ormston, R-Atari Club

Eon Software, Distributed by Electronic Arts

If you have ever played board games like Risk or Castle Risk and enjoyed playing the conqueror, then you will probably LOVE Lords of Conquest. This game is very similar to Risk in many ways, but it adds whole new dimensions to the strategy and adds a good degree of variety as well.

The main options in Lords of Conquest include: number of players (1-4), Game level (more about this later), Resources (high, medium, low), Cities to win (3-6), Music (on/off), and level of difficulty (one player mode only).

After selecting your options you now need to load a map to play on. This will be your game board. There are 20 maps available with the game, and there is also a map generator that will allow you to create your own maps. Even here you have the option of letting the computer generate maps on its own, redefining the already existing maps, or creating one exactly as you want it. This is a slow and difficult process, but is probably worth it if you are tired of using the maps supplied on the disk.

The instructions on the reference card are an absolute necessity, as trial and error just doesn't cut it. You must follow the directions exactly if you want results.

When you select a map, you have the option of using it or loading another one. It only takes a couple of seconds to load another map, and this way you can take a look at several to see which one you want for this game. Obviously maps with a lot of islands will provide a lot of inaccessible areas for games without boats! (although this can work to your advantage!) When you are satisfied with the map chosen, then press the button on YES to continue.

You will now see the resources randomly placed on the map. These resources will either be gold and pastures (level 1 only), or gold, pastures, timber, coal, and iron. The number of resources on the map depends on whether you chose low, medium, or high for the abundance level. If you chose low, there will not be many and the game will move more slowly and be more difficult. In all but the beginner game, you will have the option of moving resources around on the map to spread them out, making the odds a bit more even for all players.

Players will now take turns selecting their territories. Since you need the resources to do anything, players usually select these first. Gold is always important, but in the higher games you will also want a lot of timber for boat building, iron and coal for weapon building, and everything for building cities.

Since city building is the main object of the game, you should try to get at least one of each resource. The pastures are not used for production of cities, but they do produce horses which add to both your offense and defense ability. Horses also add to the portability of weapons.

An important consideration in selecting territories is the force points. These are the points used to determine the strength or weakness of all territories. The following chart shows how the force points work:

FORCE POINTS

OFFENSE	DEFENSE
1 point for each territory that touches target area	1 point for target area
3 points for each weapon in above areas	1 point for each each adjacent territory
1 point for each horse in areas surrounding target territory	3 points for each weapon in target or adjacent territories
2 points for boat used in attack	1 point for each horse in target or surrounding areas
3 points for weapon carried by boat or horse	2 points for each city in target or adjacent areas
1 point for non-adjacent horses moved into target area	2 points for ship in target area

I think that's all of them. As you can see, cities are only beneficial for defensive purposes. However, a city has the added bonus of making each adjacent property produce double its normal quota of resources, its own included. And since the main object of the game is to develop and maintain a pre-determined number of cities (3-6), then city development is even more desirable.

One problem I found with Risk, is that it is awkward to play a 2 player game. You really MUST have 3 or more players, and sometimes there just aren't enough people around to make a good game. Another problem I found with Risk and Castle Risk, is that I won every game I ever played. This made it so that no one wanted to play these games with me at all! Yeesh, some people are such bad sports!! Luckily, Lords of Conquest has not only 2-4 player games, but also 1 player games against a computer challenger with 9 levels of difficulty. And the computer player is NOT easy to beat, in fact is very difficult on the highest levels! These levels are only available in the one player game and can range anywhere from giving you first pick of land, first attack, and 4 extra territories; to the computer getting first pick, first attack, and 4 extra territories.

Whether playing against the computer or other players, the structure of the game is basically the same. There are several basic steps to each yearly cycle that all players can utilize. The first is the development phase (in all but the very first year--you have no resources to develop then!) The development phase is where you decide what to do with your resources. Will you build a city? Weapons? A boat? Where will you place them? These are all important decisions, and the development is done in the same order as the attack turns for the cycle, so later attackers will at least be able to see where the early attackers are building their offenses and perhaps make a counter move on their development phase. After the development phase comes the production phase. This is where your resources produce their stuff. If you are playing the medium or high chance options, then sometimes crazy things will happen to prevent production (an attack of mutant wolves! for instance). After productions comes an opportunity for

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Lords Of Conquest (continued...)

players to move their stockpiles. What is a stockpile, you ask? Well that is where all your resources sit waiting until you use them to develop them into cities, weapons, or boats! If someone else gets your stockpile, they loot you for every last scrap of booty in it, so moving your stockpile can be very important if there is any sort of threat! If you are playing a medium or high chance game, then once again crazy things can occur to prevent movement of your stockpile.

Next comes the Trading phase. This phase is only used on the 3 and 4 player modes. Here you can make "deals" with one or more players. You can deal matter-of-factly, giving resource for resource, or you can pay someone to keep them from attacking you. Of course, it is possible that they will take the money and attack you anyway! Whom do you trust in world conquest, anyway? You can trade resources, horses, and good will (ha!).

Attack phase comes next, and you know what that means! Action at last! Some important facts to remember about attacking are: You can bring a horse to an attack, but it can only move a total of two spaces (it must be able to reach the attack area in those two spaces). You can stop along the way to drag a weapon along with the horse. If the weapon was already adjacent to the target territory, then it will not increase your attack points--but it will make the weapon mobile and possibly within reach of other areas to attack. Using ships gives you even more mobility. A ship can bring a horse AND weapon to attack anywhere along the coastline! **Please note however:** if you are playing a medium or high risk game then you can be repulsed in your attack, even if your attack points are higher than the defenders! If you are repulsed, you lose not only the battle, but also all the equipment you brought into the attack (boat, weapon, and horse!) You are only allowed two attacks per attack turn. If you are repulsed on the first attack, then you cannot make the second attack.

In the 3 and 4 player versions, you have the ability of ganging up on another player by calling in allies. In each attack, the non-combatants must decide whether to side with the attacker, defender, or remain neutral. It is a fact of life that allies can be fickle!

The winner of the game is the one player who has the pre-determined number of cities and maintains them for one year. If there is a tie, then play must continue until one player has at least one city more than any other at the end of the year.

There are many utilities at your fingertips as you play the game. You can easily change the colors for the players, or just take a peek at what everyone has in their stockpiles. If a game is dragging on too long, you can save it to continue later. Or if you are in a helpless situation, you can surrender gracefully without having to listen to the winning party gloat as he slowly slaughters you.

I really enjoy playing this game. It has a great deal of variety, the element of chance can even make it so that less advanced players can do well even against the computer. The program is written with a great deal of humor, as if to say, "Hey, this is only a game! Don't take it too seriously!"

****

TIPS On BARGIN HUNTING At An AUCTION

By Mike Snively, STARBASE

(Yes, Life Partner, I know they're orange)

We've all heard or almost all have heard what great deals can be obtained at an auction, usually after the auction, the following tips may help you to find "a deal".

Auctions are a source of cheap entertainment, usually there is no cost to attend although if food service is provided, the price is often closer to the KINGDOME than MacDonald's. It's fun to watch people get caught up in the fever of bidding, watch their faces as they agonize over each bid. The happiness as they realize they've won or even the sudden realization that they've paid list or new pricing for used equipment. It's game that one can participate in or merely watch.

HOW DO YOU FIND AN AUCTION? Read the local newspaper, in the (Seattle) TIMES or P.I. look at section 542 of the Classifieds, look at bulletin boards. Once you registered for an auction you will find your on their mailing list and will probably get annoucements of future auctions by that auctioneer.

WHICH AUCTION IS BEST? A bankruptcy with no reserve. No reserve means that there is no established minimum bid price. While a bankruptcy means some one took a bath in red ink, the equipment is in working order even though the firm isn't. Surplus auctions will have equipment that needs a closer look, why is the firm getting rid of the equipment? Is the equipment worn out? Are the repair costs close to what new equipment is selling for? Remember electronic devices have generally gotten less expensive (except for memory chips) and have been up graded to do more for the same or less money.

DO YOUR HOMEWORK. If you have decided that you have a need that can be met through an auction, read magazines, look on the retail market, know what new equipment is selling for and if possible what used working equipment is selling for.

GO TO THE PREVIEW. Generally there is a specified time before the auction for close inspection of the equipment or lots to be auctioned off. Sometimes you can check the operational status of the device during the preview or at least check to be sure all the parts are there. Make notes of the lot numbers you are interested in.

LISTEN TO THE AUCTIONEER. The auctioneer will explain the rules under which the auction will be conducted. Pay attention to which lot or group of items is currently being auctioned off. Sometimes the auctioneer will put a series of similar items up for bid with high bidder getting choice. Example: lots 12 through 23 are printers, from cheap to industrial, and you want lot 18. You will need to be high bidder to be sure that you get lot 18. The high bidder will have choice or may elect to buy all the lots at the bid price per lot.

BRING CASH. Unless otherwise indicated, you must pay in cash for your purchases. Sometimes personal checks are accepted as well as plastic money, it is different with each auction or auctioneer.

HOW MUCH TO BID? If you've done your homework, you know how much that item you really want costs. Is this item the same as what you want or similar? Is it new or used? Does it come with a warranty, most auctions are as is where is. Is it the color you wanted (yes, LIFE PARTNER, I'll try to get beige next time)? Determine your budget for this item, for new items I'm willing to pay about half price, more if it comes with a manufactuers warranty. For used equipment, hard use 10% list or new market price, moderate or light use up to half price. Determine what it's worth to you and stay within your budget for it. It is so easy to get caught up in the spirt of things and pay the new price for used equipment without a warranty and in need of extensive repairs. Allow for the cost of repairs in your bidding.

With the club auction coming up soon, you can practice for other auctions and yes it's alright to get caught up in spirt of things since the money goes for a good cause.

THE MOST IMPORTANT ADVICE TO REMEMBER IS: Do your homework, know what it's worth to you.

HAPPY HUNTING

****

STUFFING YOUR PRINTER

The Supra 64K Micro Stuffer

Reviewed by Rod Dickison, S*P*A*C*E

When I got my ST I didn't think I would miss my XL. I didn't. But I did miss one of the peripherals, my ATR8000 and the 64K print buffer. Print spoolers just didn't cut it. I like hardware you don't have to set up.

While working the floor at Atari Trek '88 and also making a list of things to buy before the Sunday evening closing, I SPOTTED THIS LITTLE BOX WITH BIG LETTERS ON IT. "SUPRA MICRO STUFFER. 64K PRINT BUFFER. ST AND 8-BIT." Hand to check book, practice penmanship, letters and numbers, show practice writing to Ron (of Butler's Computers), he said he would trade my practice writing for the Micro Stuffer. Deal!

The Micro Stuffer comes with a six page manual. Three of the pages are only a quarter page long, two others are appendex A and B, with tech specs. The Micro Stuffer itself has a on and off switch, three LEDs and two push buttons. One of the LEDs is the power on and off indicator. When you turn it on, a self-test runs for eight seconds, after that you print in your normal way. It also does graphics. The Micro Stuffer accepts data at very high speed and saves it until the printer can use it. It accept and sends data at the same time. I printed a 18 page text file and while the third page was printing, the computer was returned to me. NOTE! If for some reason you want to stop printing, stop your computer from printing and press the clear button on the Micro Stuffer.

One of the LEDs is for the buffer. It is off when the buffer is empty and blinks when accepting data. And, the fuller the buffer gets the faster the LED blinks, until the buffer is full, then it is on all the time. At that time the LED on the repeat button stars to blink. The buffer will continue to send and receive data.

If you want to print multiple copies, just push the repeat button each time the printer stops, and go play your favorite game while printing your copies. The only time you cannot use the repeat button is if you over-fill the print buffer, (when the repeat LED is blinking,) which can happen on graphics.

I printed three disks full of PM icons, (double sided, over twenty-one hundred shapes), using the Clip Art PM.cat program, with title pages in around two hours. While one file was printing I was setting the next file up and sending it on its way.

With increased numbers of "DOC" and "read-me" files on disks these days, especialy PD disks, a print buffer becomes more and more useful. It's a great addition for only around $75.00. Now I have to find out if it can be expanded to 128K or 256K or !!!

****

A 400 KEYBOARD UPGRADE

Hardware Hacking by Rob Hendershot, STARBASE

First question. Does anyone still have the 'old' 400 Atari? Next question. Do you still use it but hate to, or do you try to forget it because of the terrible feel of the membrane keyboard? Well I have devised a CHEAP way to get a REAL keyboard. Of course you have to be able to solder and cut some plastic with an Exacto Knife. But the whole deal costs less than $10. Mostly depending on the cost of the 4 SPST switches. And of course you can't include your time. I mainly did this conversion to see if it could be done.

For starts, if you do decide to do this modification, I don't think you have to worry about invalidating your warranty. Cause the 400 hasn't been made for years. But there is always the possibility that you bought it new & recently. In which case, wait until the warranty runs out. I won't be responsible for any mistakes or problems you have, the usual disclaimer. But if you do decide to do this modification, I'll help you as much as possible, time permitting, but you're pretty much on your own. You also have to be able to figure out the wiring of the keyboard, new & old, and be able to solder half-way decently.

First you have to buy the $3.95 keyboard from (ugh) Radio Shack. It has 1 more key than the standard keyboard, and the lay-out of the keys are a little different, although it is the standard 'QWERTY' lay-out. Next is a 2 foot length of 25 conductor flat lead. This kind of wire makes the job neater. You only use 22 of the wires of the flat lead for your cable run to the keyboard, the other 3 wires can be used for the keyboard jumper wires. But if you have 22 lengths of #22 wire 2 foot long and a couple of feet more of the same you can do the same job. Next you have to replace the Consol keys with new switches, so you have to buy 4 short momentary contact switches (SPST), normally open. The ones I bought were from 'ABC Electronics,' and were as big around as my thumb and an inch long. The main thing with the switches to remember is the length. Which when installed, must NOT come in contact with electronic parts or the mother board.

The new keyboard is wired for the Radio Shack machines. So, of course you can't just plug it in. You have to cut traces and solder wire to make it work. I have the Doc's for the matrix wiring of the old keyboard. I will bring them to the next STARBASE meeting so you can make a copy. Also I'll bring the '400' so you can look at the conversion if you have a mind to do this modification. *Note: Cut as few wire traces, on the new keyboard, as possible. This saves lots of soldering.*

The new keyboard is slightly wider that the old keyboard, hence the reason for cutting of plastic. The better you are at carving projects the nicer the finished product will look.

The only problem I have experienced so far is the space bar is easy to get knocked off. My son, 10 years old, did this the first thing. But the space bar went right back on. And no real harm done. The reason for this problem is that the keyboard sits higher and the bottom of the keys are exposed. A small price to pay for a real keyboard.

Well, I wonder what kind of nonsense I'm going to try next. Happy Hacking.

finestkind

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EVALUATION Of ARC, DISK COMM, And ALFCRUNCH

Is Alfcrunch The Best 8-Bit File Compression Program?

By Marty Albert, GEnie Sysop

June 9, 1988. Well, here we go again. Another comparison of file compression systems for the Atari 8-Bit Computers. Frankly, the way things look from here, this may very well be the last such comparison done by me. (what's that? cheering?!?)

This time, I've taken a look at ARC/ARCX 1.2, Disk Comm 3.2, and the new AlfCrunch 1.2 that has just started showing up. I've taken a very close look at them in fact, and I had more than a few surprises! First, let's see the test data, them my own editorial comments.

Test Setup

All tests were done on the following system:

256K 800XL	1-1050 with US Doubler
1-meg MIO	SpartaDOS 3.2d

All of the source files were on the 1050 and the compacted files were written to the MIO RAM-Disk during creation. For recovery, the compacted files were on the MIO and the recovered files were written to the 1050. In all cases, the high speed option was enabled. In all cases, the computer was re-booted to get rid of all excess memory use between each creation and recovery. Recovery was always to a freshly formatted disk.

The files use as source files were:

SAVEd BASIC	12078 bytes
Binary Load	13054 bytes
Compiled T-BASIC	11877 bytes
ASCII Text	8740 bytes
Atari Font	1024 bytes
Virtuoso Show	6528 bytes
MI Picture	7684 bytes
Daisy-Dot Font	2307 bytes
KOALA Picture	1881 bytes
RLE Picture	6550 bytes
TOTAL	71723 bytes

All byte counts were based on the numbers provided by the SpartaDOS 3.2d directory listing. Times were kept with a stop-watch and are as accurate as possible. Allow a +/- 3 seconds to the times. On ARC/ARCX and on AlfCrunch, the screen was OFF to speed up the processing. They were also run from a SpartaDOS BATch file and/or the command line input feature. On Disk Comm, the entire 256K of the 800XL was used.

Test Results

The following chart is the results that I got with the test:

Program	TTM	TTR	Size	% Change	Errors
ARC	7:01	6:07	55630	-22.44%	none
AlfCrunch	1:37	0:57	50541	-29.53%	none
Disk Comm	3:53	1:36	66416	- 7.40%	none

Evaluation of Tests

ARC/ARCX Well, no big surprise here. ARC is slow, but does a wonderful job of compression. The compression of the files is not really all that big a deal for the local BBS, but for an on-line pay service like GEnie or CompuServe, that can be *very* important! Again, I failed to get the damage to the recovered files that has been so often reported. But, this is all old news.

Disk Comm Again, nothing much different here, either. Disk Comm is much faster than ARC, but doesn't do much in the way of compaction. For the occasional boot disk, Disk Comm is probably the best way to go, but more on that later in my editorial comments.

AlfCrunch All I can say is WOW! I've always said to those that don't like ARC that as soon as something better comes along, I'll go for it. Well, here it is! Not only is AlfCrunch faster than ARC/ARCX, it's *faster* than Disk Comm! And, to sort of add insult to injury for Disk Comm, AlfCrunch even compresses *better* than ARC!

After I saw the above results, I went back and used AlfCrunch on many more files, 40 all told, and did not not get a single damaged file. I tried all sorts of files ranging from long BASIC XE programs to tiny little data files. They all worked fine after being processed and recovered. It looks very good, but again, more on that later.

Editorial Comments

(DISCLAIMER): The comments here are my own. They are NOT the official position of anyone or anything except myself, nor should they be read as anything but opinion based on the above tests. I've always liked ARC. It may be slow, but it's good. Perhaps that's because as a SysOp on GEnie, I'm more aware of the costs in dollars for downloading big files.

I also like Disk Comm. It's easy to use, reliable, and fast. It also does at least a little compaction, which is more than can be said for the other boot disk systems. I've never been happy with the light compaction, though, and I still think that a better way can be had. So, along comes AlfCrunch. At first, I thought it to be just another cute toy that someone had done. Was I ever wrong! When I ran the tests (by the way, AlfCrunch was the last one I tested), I was shocked by the speed. As you can see, AlfCrunch is far faster than Disk Comm. At that point, I figured that the compression would be light. When I did the directory and saw the byte count, I just knew that SpartaDOS had just shown me some hidden bug. I tried it a few more times, with the same results, and the file recovered into the right number and size of files, and they all worked! Needless to say, I was blown right out of the water! Then came the neat part.

My ARCVIEW program works on the AlfCrunched file! I get some garbage characters in there, but it works. I think (not sure!) that this is due to the file header used. That remains to be seen for sure, though.

The Bottom Line Is This:

For boot disks, keep on using Disk Comm. It's the best that we have right now. I'd like to see better, but who knows?

For the files that you've been ARC'ing, have a look at AlfCrunch. As you can see, it seems to be far superior to anything else now available. One note about AlfCrunch. The DOCs are *very* complete, except that the author's name/address info is skimpy. What shows up in the DOCs is: Alfred, Programmer's Aid BBS, (416) 465-4182.

(Continued next page, 2nd column...)

NEW PRODUCT ANNOUNCEMENTS

From The Mail Bag

Migraph Releases SCANART For GEM Publishing Applications (ST)

June 25, 1988. Migraph, Inc., a leading developer og GEM-Based graphics software announces the release of **ScanArt** (TM), a collection of high quality graphics and illustrations specially selected for use in desktop communications.

ScanArt designs can be used to produce effective, attention-getting layouts, newsletters, flyers, brochures, and more. Over 100 images are included in a variety of styles from a wide range of themes such as sports, holiday, humorous, and animals, insuring that the user has just the right image when he needs it.

Images in the ScanArt collection originate with professionally drawn line art which has been optically scanned at either 150 or 300 dots per inch. Each image is then carefully edited to maintain its quality. Because ScanArt images are at a much higher resolution than screen images, printouts are excellent whether on a dot matrix or laser printer.

ScanArt images are saved in digital Research standard compressed .IMG format and can be used by any application that uses .IMG files such as Ventura Publisher, GEM Desktop Publisher and Timeworks Publish-It on the IBM and Supercharged Easy-Draw and Timeworks Publisher ST on the Atari ST.

ScanArt is available now and retails for **$49.95.** 5.25" and 3.5" formats are available. For information contact **Migraph** at **(206) 838-4677.**

COMICBOOKING YOUR ATARI (8-Bit)

BUECO, formerly known as FREELANCERS R US, has announced the release of Version 3 of **COMICBOOKING YOUR ATARI** (R) **("CYA")**, a popular comic book database system for the Atari 800, 800XL, 1200XL, 65XE or 130XE home personal computer.

"Version 3 of CYA," said A. L. Bue, owner of BUECO, "speeds up searches, updates and delete features with improved machine language routines."

"BUECO will provide Version 3 upgrades to licensed CYA users for a shipping and handling fee of $5.00," Bue announced.

CYA is touted as both a data tool sensation and a data management experience for comic book collectors. CYA is a 48K, one or two disk drive (your choice) menu driven comic book system providing data entry, updates, sorts, searches and six screen and/or EPSON (R)-compatible printer reports. An excellent manual is included.

"It's even faster with a ramdisk, such as those available on 130XE's," said Bue.

CYA will accomodate comic databases, or files (as many as you like) in groupings of 255 per file. One unique feature of the system is its entry mode. Before starting a data entry session, the user may select an option that causes the computer, after each comic is entered, to ask questions concerning comic characters or make random offbeat comments, addressing the user by name.

"I built this light-hearted feature into the software," Bue said, "because setting up a database is a time-consuming art and I want the user to have at least a little humorous diversion during the process."

CYA retails for **$19.95** and is available by mail from **BUECO, 3900 Hampton Drive, Anchorage, Alaska 99504. (907) 333-9052** for details.

ST CHESS (Version 1.01, 07-13-88)

Shareware by Paul Holland, S*P*A*C*E

A new CHESS game for ST/Mega computerists is now being distributed as shareware. The program is available for downloading from local bulletin boards *(currently BYTES & PIECES and THE REEF. Several users group librarians should also have this program by the time you read this).* Its file name is **CHESS101.ARC.** This approximately 39K long arc'd file contains the following:

1.	README	Text instructions
2.	CHESS.OPN	Opening Library
3.	CHESS.001	Sample problem
4.	CHESS.PRG	The chess program (written with Mark Williams C)
5.	BOARD.PC2	

CHESS runs in medium resolution, has colorful graphics and a comfortable user interface. Player options include:

- Adjust level of play by changing the time consumed by computer. This is allowed at any stage of the game.
- Get hints as to what the computer thinks is your best move.
- Post the move sequences the computer generates as it analyzes its own move.
- Play either the black or white pieces.
- Switch the board display 180 degrees.
- Save games (moves are preserved) to replay at a later time.
- Save a listing of the moves.
- Take back moves.
- Easily set-up any board layout.
- Allow the computer to play both sides.
- Help key (displays list of options).

Getting started is easy. Just be sure you have the files CHESS.OPN and BOARD.PC2 on a disk along with CHESS.PRG. Run the program. You will then be asked for a time interval and, depending on your level of play, you respond. If you're a beginner or learning the game I'd suggest a short time of from 5 to 20 seconds.

Next, the opening book is loaded (which is editable via any text editor) and you are asked to move. Then by clicking the mouse, you pick up the piece and drop it on the desired square, by (again) clicking the mouse. The rest is up to you. Can you defeat the ST?

The program plays a good game of chess, although it is not competetive with the commercial programs. The search rate is typically 100-300 nodes/sec. on an HP Vectra (8 Mhz. 286) and about 300-900 nodes/sec. on an HP 350 (25 Mhz. 68020). On the ST the search rate is 60-200 nodes/sec.

Inquires, comments, suggestions, or shareware compensation ($5 suggested) can be directed to the author: Paul Holland, 1235 SW 152 St., Seattle WA, 98166.

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Eval. of Arc, Disk Comm, and Alfcrunch (continued...)

I'd like to know just who this guy is! So, Alfred, if you're reading this, let us know who you are!

Marty Albert, GEnie Atari 8-Bit RT SysOp. GEnie Mail address --- MARTY.A, Suite 6-216, Box 4005, Carmichael, CA 95609-4005.

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Best Electronics
2021 The Alameda Suite 290
San Jose, CA 95126
408-243-6950

SUMMER SPECIALS

ST/MEGA

Michtron Eprom Burner (up to 512K eproms) $199
Atari SH204 Host Adapter This is the cheapest Atari hard drive host adapter availlable. Can be used with standard hard drive controller cards like the Adaptec 4000A. Great for building low cost hard drive systems. $60
P.C. Ditto cable kit (3 ft cable with installed 14 connector one side and bare wires the other side and 34 edge connector + pin outs) $10 ea.
Because you asked for them we have brought in! 3 ft SC1224 and SM124 monitor extension cables! (M to F) For use with Goldstar and Samsung monitors with one sided short cables $25
13 pin Female cable connectors $4.75
14 Pin Female cable connectors $5.60
(Use these 14 pin Female connectors with a standard printer switch box and make a drive switch box for P.C. Ditto drives)
Mouse Feet (our feet have twice as much teflon material) $4 pk (4)
Mouse Eyes (Taiwan mouse only) 8pk (one mouse set) $5
Mouse Cleaning Kit by Tacklind $12.95
Mega Keyboard Covers $8.50 ea.

400/800/XL/XE

Digital Devices APE-LINK Kits (adds extra SIO Connectors to Your Atari Daisy Chain) Bare P.C. Board $10 Kit $21
1030 Modem Special ! 29.95
New 256K Atari Game Cartridges in stock. See our cataloge for listing!
Thomson Proburner Eprom Burner $149.00
XL Keyboard Mylars in stock now! $22 ea
In Stock 130XE Cartridge Connectors $6.30
Many people have asked which Mailing List program we use at Best Electronics, we currently use Super Mailer+ from Royal Software. Super Mailer program (D) $39.95
XL to XE Software Compatiablty Mod by Tom Lawless. This two chip/switch mod is for enhanced 800XL computers (256K-512K). $8
Hardware upgrade kits and P.C. boards that require the 41256K ram chips have been put on hold because of the high price of ram chips. We hope to ship again once ram chip prices start to drop down!

Items Back in Stock!

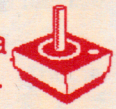
ST/Mega 6ft Midi Cables $6 ea
ST/Mega 6ft Midi Ext. Cables for Midi Maze $6
ST/Mega Mouse $50
520STFM/1040ST internal power supply $68
ST/Mega YM-2149 Sound chip $11.75
1027 Power supplies $30
1027 Heads $35 1027 Printer Mechanism $50
Parker Brothers Frogger cartridge $12
How to program you Atari in 6502 Book $4
Atari RX8034 Pole Position cartridge $16.50
Atari RX8029 Real Sports Football $16.50

MORE ATARI GOODIES

Astra SW2 Dual Monitor/power switch box $59
Atari Gold Fuji symbol with tie tack mounting $5
ST/MEGA 24" Hard Disk Drive cable $25
1050 Mother Board w/exchange board $95
1050 Mother Board w/o board $110
130XE Mother Board w/exchange board $95.00
1050 6800 MF 35 Volt Electrolytic capacitor $1.20
520STFM SSDD Internal Disk Drive Belt $6.30
Spinnaker Educational cartridges, Adventure

MISCELLANEOUS ITEMS

The new Atari XF551 DSDD Drive (8 bit computers) $199
XF551 Disk Drive Cover $8.50
810 Disk Drive Special! $100 $110 w/ I/O cable + power supply
810's are reconditioned by Best Electronics and carry a 90 day warrenty!
New low price on 1 foot I/O cable (drive to drive) $8 ea
Atari Deluxe Binders (see 88 catalog) $2.25ea CASE of 14 $2ea
New Atari Belt Buckles $12
Atari name/ Logo 1" x 1" Sew on patch $5pk (5 patches)
South Paw Adapter cable (M to F) This cable rotates joystick functions so a left handed person can use a standard joystick. Example: fire button is at 2 o'clock position. $4
Indus GT 5 1/4" drive field service manual $32
Dig Dug "T" shirts S,M,L $5 ea.
Joystick regular $6.50ea Sale! $5 ea
1027 Ink roller Reg. $3.95 Sale! $3 ea.
1020 Color Plotter color pens $2.50 set
1020 Plotter paper Reg. $3.50 pk Sale $2.95pk
Atari CX24 Slimline Joystick Reg. $11 Sale $9
Digital Devices 64K Buffer/Printer cable $50
600XL 16K Computer w/power supply $55
600XL 64K Computer w/power supply $75
5 1/4 Disk Notcher Reg. $5 Sale $4 ea
Joystick Blaster w/Adjustable fire rate control. ST/Mega,8 bit, 2600 Reg. $4.00 Sale $3.50



CLUB NEWS

Participating PSAN Atari Computer Users Groups

A.U.G.I.E.

Atari Users Group of the Inland Empire

PRESIDENT	Don Lucia	(714) 883-3547
VP	John Giardino	" 798-1824
VP (Riverside Annex)	Lonnie Mount	" 682-6824
TREASURER	Randy Reiseck	" 927-2082
SECRETARY	Shannon Ng	" 862-0296
8-BIT LIBRARIANs:	John Parker	" 885-1554
" (Riverside Annex)	Ed Smith	" 796-3145
ST LIBRARIAN	Larry Landon	" 887-1040

AUGIE Meets: 2nd and 4th Saturday of every month from 3:00-5:00 PM at the East Baseline County Branch Library, 27167 Baseline Rd, Highland, CA. *(NOTE: Officers Meet at 2:30 PM prior to the 1st Meeting/month.)*
Riverside Annex Meets: 1st and 3rd Monday of every month from 7:45-9:30 PM at the California School For The Deaf, 3444 Horace St., Riverside, CA.
Mail: A.U.G.I.E., 3905 N. Lugo, San Bernardino CA 92404.

FROM THE PRESIDENT

Well folks as you can see here we are in the BEST NEWSLETTER in the West. We have joined PSAN so that all of you can get the latest information and the best articles published in the Atari Kingdom. We want to take this opportunity to thank all of the people associated with PSAN and especially the people of S*P*A*C*E. Special thanks to Jim Chapman, George Terpening and Ron Butler. Since we are under the gun to get this off to PSAN in time for the August issue I will get off the soap box for now and finish these thoughts another time.

Don Lucia...

B.R.A.C.E.

Bellevue Redmond ATARI Computer Enthusiasts

PRESIDENT	Wally Wong	641-1866
VICE PRESIDENT	Joe Mraz	747-2433
TREASURER	Joe Asaif	746-0737
SECRETARY	Gary Skelton	454-7488
EDITOR	Wally Wong	641-1866
8-Bit LIBRARIAN	Joe Mraz	747-2433
16-Bit LIBRARIAN	Richard Coate	547-0460

Meets: 2nd and 4th Mondays of the month at 7:00 PM at the Lake Hills Library, 15228 Lake Hills Blvd, Bellevue, WA.
Mail: P.O. Box 70097, Bellevue, WA 98007.
Dues: $15 per year.

R-Atari

Users Group

PRESIDENT	Jim Harvey	(206) 675-0921
VICE PRESIDENT	Charles Martin	" 675-5468
SECT./TREASURER	Alan Beckett	" 675-2152
LIBRARIANs: 8-Bit	Randy Nollan	" 679-2216
ST	Alex Ancheta	" 675-7628
EDITOR/BBS SYSOP	Thom Lawless	" 321-5127
BBS SYSOP	Jim Belknap	" 675-6444

Meets: The third Saturday of each month at 7:00 PM (6:00 PM set-up time) at Harbor Tower, 7330 700th Ave. West, Oak Harbor, WA.
Mail: P.O. Box 845, Oak Harbor, WA 98277.
BBS: 'THE FREELANDER BBS', (206) 321-5127, 24 hrs, 300/1200/2400 baud.
DUES: $15.00 per year.

FACCS

First Atari Computer Club of Spokane

PRESIDENT	Marie Foster	(509) 926-5532
8-BIT V.P.	Steve Coffman	" 489-8183
16-BIT V.P. / EDITOR	Bob Morton	" 244-2412
TREASURER	Norm Iverson	" 253-4733
SECRETARY	Merry Iverson	" 253-4733
BBS SYSOP	Richard Franck	" 534-2736
8-BIT LIBRARIANs:	Keith Busch	" 926-9369
	Paul Rose	" 928-5309
16-BIT LIBRARIANs:	Chuck Hagy	" 838-7741
	Clayton Jensen	" 327-9309
	Alan McCoy	" 448-3123
PAST PRESIDENT	Ron Hoffman	?

Meets: The 2nd Thursday of the month at 7:00 PM at Big Brothers Bingo, N. 1126 Monroe (corner of Boone and Monroe) in Spokane.
Mail: P.O. Box 5121, Spokane, WA 99205.
BBS: "The Atari Zone", (509) 535-8554, 24hr., 300/1200/2400 baud. Operating with Carina II software and a 20 Meg HD. *(Note: BBS is temporarily down.)*
Dues: $18 per year (per family).

NEWS FROM THE FRONT

The Midi Maze contest went very well this month. I believe that everyone had a good time. We had only a few minor glitches with midi cables. Thanks Bob for running the contest and keeping track of all the contestants.

In August we will be showing off the ST's capability to do CAD. So far it looks as though we will have a demo of Drafix thanks to American Computermasters. We have also had an offer to show CAD 3-D. We have a nice demo version of Athena CAD that will be available on disk. I think Alan will be putting together another disk as well. He has lots to pick from as we just received the last of the S*P*A*C*E library. Thanks again S*P*A*C*E!

Not to be outdone, the 8-bit machines will have two demonstrations going on. Jim Sommerville will be demonstrating how he runs his business (Johnson's TV Repair - and Authorized Atari 8-bit Repair) with an Atari 8-bit, Visi-calc, and Atari's Color Accountant. Kevin Evart will also be having a clinic on the XEP-80 (80 column periferal). I happen to know that Merry Iverson has a full explanation of the 8-bit disks in her column so I will defer to her in letting you know what you have to look forward to.

Hopefully in September our meeting will include the other user groups. Stand by for more news in coming months.

I forgot last month to thank Norm and Perky LaBrett and the three little LaBrett's for the wonderful job they did in June with the educational software demonstration. If three year old's and eight year old's can demonstrate this well.... I know that a lot of you 'older' chaps could do it as well.

I asked Tim Osborn if he would consent to be the rental officer and he agreed to look into it and set up a database to keep track of the people who check out things. We are in need of more donations for this library and for the raffle table. If you have sofware sitting around that you haven't been able to dispose of why don't you donate it to the club?

SECRETARYS REPORT

F.A.C.C.S. would like to welcome the following new members to our club: Jerald Cork and Teresa Franco of Idaho, and Jack Prevost of Spokane.

Next month we will have several new disks for the 8-bits. We will have a new educational disk which will consist of Madlib on one side (to help your kids learn nouns, verbs, adjectives and adverbs) and on the other side we have found a wonderful program called Computer Aided Instruction Construction Set (a remarkable way of studing for that upcoming test). We will also have a new music disk consisting of two programs - Original Synth, to turn your keyboard into a unique sound Synthesizer complete with light show, and the

other a music video from Germany. Lastly we have a new Icon Disk for those of you with a taste for the provocative.

As most of our members already know the Atari Zone is down. The hard drive has been sent in for repairs. We will have it back up as soon as possible. We would like to apologise for any inconvenience to our members, however there are several other nice bulletin boards in town, I know this is small consolation, but we will keep you posted.

I would like to personally think John Henry for volunteering to type a lenghty program from a magazine for us. We really appreciate all the help and public domain programs we can get. Remember it's your club.

Merry Iverson

KCAcE's

Kitsap County ATARI Computer Enthusiasts

PRESIDENT	Bill Penner	(206) 373-4840
SECT'Y/TREASURER	Mack Burns	" 437-2751
EDITOR	Darren Tonnessen	" 842-3992
8-Bit LIBRARIAN	Wayne Boivin	" 674-2140

Meets: The 2nd Wednesday of the month at 7:00 PM at the Silverdale Navy Recruiting Offices (directly across from Safeway).
Mail: P.O. Box 2333, Bremerton, WA 98310.
BBS: KCAce's BBS, (206) 674-2352, 24hr., 300 baud.
Dues: $15 per year.

MEETING NOTES

Nothing significant took place during our July 13th meeting. Ted Tuggle was not able to lighten our day by showing his latest "mod" to his ST as he has moved to the boonedocks somewhere. Rumors were discussed at length however. If you want to know what happens at these gatherings then try to make it to the next meeting. Hope to see you there...

Darren Tonnessen

T.R.A.C.E.

The Richmond Atari Computer Enthusiasts

PRESIDENT	Terry Schreiber	(604) 272-5789
SECRETARY	John Goolevitch	
TREASURER	Chris Boenigk	
BBS SYSOP	Terry Schreiber	(604) 272-5789

Meets: 1st and 2nd Monday of the month at 7:30-9:30 PM at the Thompson Community Centre in Richmond, B.C. (call for details).
Mail: P.O. Box 1192, Postal Station A, Delta B.C. V4M3T3; or from the U.S. use: P.O. Box 2037, Point Roberts, WA 98281.
BBS: T.R.A.C.E. BBS, (604) 272-5888, 24hr., 300, 1200, 2400 baud. ST based w/60 MEG HD running BB/ST software from QMI.

T.R.A.C.E. TALK

By Terry Schreiber

"Summertime and the living is easy" - well not too easy! We hadn't realized it but due to an error on somebody's part we haven't a meeting hall for the summer. The hall is closed for staff holidays and will re-open in September. All members have been meeting at my home for the last month and this will continue until the first week of September.

Bill Robulack, our B.C. rep was dismissed from Atari this month. I will report more on this later as Bill is in negotiations with Atari at this time and a report could jepardize the situation.

Our membership is again taking on a growing trend with the addition of five eight bit users. Heh maybe it's not dead yet! I know I have been running the new emulator on the ST and digging out all my old 5 1/4 inchers and dusting them off.

Our Atari show might take a beating with the loss of our rep so things are on hold till I can get in touch with Ian Kennedy of Atari Canada and see what they have planned for us. They had agreed to support us, but I would like to know the extent before going ahead with any major plans and commitments. Still no word on the shipping dates of the 20 mhz upgrades. The math co-processor is a reality, but still too soon to report on, maybe next issue.

S*P*A*C*E

Seattle Puget Sound Atari Computer Enthusiasts

PRESIDENT	Jess Lantz	473-2420	Tacoma
VICE-PRESIDENT	Jim Chapman	566-1703	Tacoma
ST SIG CO-PRESIDENTs:	Carolyn Caine	851-4895	Gig Harbor
	Erick Camp	841-0091	Puyallup
TREASURER	Tom Neitzel	473-0187	Tacoma
HARDWARE SIG LDR.	Rich Gratzer	565-5373	Tacoma
MEMBERSHIP SECT'Y	Bruce Prouse	927-2661	Puyallup
CORRESPONDING SECT'Y	Nick Berry	759-1473	Tacoma
RECORDING SECT'Y/Sysop	Cindy Bowman	248-2238	Seattle
8-BIT LIBRARIAN	Bruce Prouse	927-2661	Puyallup
ST LIBRARIAN	Geo. Terpening	941-7155	Auburn
MEDIA LIBRARIAN	Blake Herring	564-3265	Tacoma
PROGRAM CHAIRMAN	Mike Bjorkman	246-3721	Seattle
EDITOR	Chris Carson	565-8189	Tacoma
BBS SYSOP	Dan Harris	848-3371	Puyallup

Main Meeting: 1st Saturday of the month at 6:00 PM in the Gold room of Highline Community College, 2400 So. 240th, Des Moines (just West of Pacific Hwy. South and the Midway drive-in theater).
Tacoma Sub-Group: 2nd Saturday of the month at 10:00 AM at the South End Neighborhood Center., 7802 So. L, Tacoma, ph 591-5098.
ST SIG: 2nd and 4th Wednesdays of the month at 6:00 PM at Butler's Computer Service, 28717 Pacific Highway So., Federal Way, WA, ph 941-9096.
Hardware SIG: 4th Saturday of the month at 10:00 AM at the South End Neighborhood Center, 7802 So. L, Tacoma, ph 591-5098.
BBSs: BYTES & PIECES (S*P*A*C*E North), (206) 241-8963, 24hr., 300, 1200, 2400 baud. ST and HD based, running BB/ST software. THE REEF (S*P*A*C*E South), (206) 848-3371, 24hr., 300, 1200, 2400 baud. HD based running BBS Express ST software.
Mail: P.O. Box 110576, Tacoma, WA 98411-0576.
Dues: $15 per year. Size: 225+ members.

S*P*A*C*E MAIN MEETING COMING ATTRACTIONS:

AUGUST 6th - HARDWARE MODS/ADD-ONS
SEPT 10th - EDUCATION (Meeting date moved due to Labor Day holiday)

Prizes awarded to attendees at ALL Main Meetings!

S*P*A*C*E MEETING NOTES

For the July 9th Picnic by Cindy Bowman

Greetings again, everyone. We did not have our usual S*P*A*C*E Main meeting on July 9th due to the fantastic July Picnic! If you weren't there, you missed the fun.

The picnic was held at the Point Defiance Park in the Tacoma, Washington area. It took me a little time to find exactly where everyone was by the time I arrived at noon. You see, I'm one of those "ignorant" Seattlites who hadn't been there before! There was an 8-bit and 16-bit computer setup for all to use as well as the librarians' use for copying disks if needed. Everyone was just standing around enjoying various forms of conversation, drinking in the glorious sunshine, when a few members decided we had better start eating, or the mass amount of food and drink would not disappear before the end of the day!

Boy, what a layout! All kinds of salads and munchies, sodas, desserts, chicken, hamburgers, hotdogs, beans, and even a 6 foot submarine sandwich! After everyone was done eating, you could either walk around in the park, play with the kids in the playground adjacent to our reserved picnic area, or walk down the steps to the waterfront and the boathouse, all the way to the ferry dock to see if you were lucky enough to witness another dock ramming! How about walking or driving over to the Point Defiance Zoo and Aquarium? Yes, some did that too.

Overall, I'd say we all enjoyed the day of leisure and "computer fellowship." Not everyone was talking about computers, though. I heard a rumor that some members were discussing the fine art of parenting, not to mention other conversations I can't discuss here!

One of the highlights of the day was when Jim gave away all those door prizes! A couple in particular were the $90 attendance drawing which Michael Lacey didn't win because he wasn't there; and the $30 gift certificate which was won by John Haley! He chose to take one of the software prizes available [Dungeon Master]

instead of the $30 gift certificate.

As I mentioned before, you really missed a good picnic if you didn't make it, but then again, there's another chance next year!

STARBASE

ATARI COMPUTER USERS GROUP

PRESIDENT	Steve Drake	782-3691
VICE PRESIDENT	Terry Tallman	259-5949
16-BIT LIBRARIAN	Omar Crawford	653-7671
8-BIT LIBRARIAN	Kevin Thrapp	776-2061
SECRETARY	Chuck Betker	
TREASURER	Steve Drake	782-3691
EDITOR	Al Cummings	784-8658

Meets: 2nd Friday of the month, 6:00 PM at the Mountlake Terrace Library, 23300 58th Avenue West, Mountlake Terrace, ph 776-8722.
Mail: c/o Steve Drake, 8307 27th NW, Seattle, WA 98117.
Dues: $15 per year. Size: 85+ members.

Your President Speaks!

I sure hope this issue gets out before our August meeting. I have a feeling that more than two of us will forget about the "new" meeting place. (See ad elsewhere for address.) I for one am looking forward to seeing our "new" building. Our membership is growing and can use a bigger place.

Here it is, **Auction Time** once more. Lets all search through our computer cabinets and see what we're not using any longer. If you've got an expensive piece of hardware or software, bring it in and we'll work a percentage deal with you. If you've got anything electronic that you're no longer using, bring it in. From radar detectors to compact disk players. Let us help you sell it. I sound like a want ad commercial for a local newspaper! **BONUS!!** I'm currently working on what I hope will be a real surprise for those of you attending this years auction. No clues, other than I think you'll find more than the usual items for sale at this years function! Don't call me, trying to pry out of me what I'm up to, either. NOBODY KNOWS!! That's just in case I'm a failure. See you **August 12th**, hopefully with lots of cash in your pockets.

Being President isn't all it's cracked up to be. I just turned 37 and don't seem to have all the energy I used to. It really takes some doing to try and make every meeting fun and educational. I miss the "old time" Starbase members. People like Bruce Noonan, Wes Sims, Claire, Ken Bradley, Terry Tallman, Doug Olson, John Martin, Dan Flanagan, Don Pefley, Don Edwards, Paul deAnguera and a few more I can't think of right now. Thats not to say I hate all of the new members, but all of those I just mentioned gave us a broader base from which to draw from for all the club activities. Let's face it, there aren't a lot of volunteers. You've heard this story before, but it's true. If only two of you would come to me every month and say you've got something of interest that you'd like to share with the group, I'd probably kiss you! Make my day, will you please?
Thanks. See You In August, Steve

VP's REPORT
By Terry Tallman

Huh? What meeting? We meet in the summer? Article? Didn't I write one in 86 or 87?

Ok guys, I'll be there at the auction with all the stuff I outbid Mike for last year. I have some pretty good 8-bit stuff to go on the block. And some ST stuff to.

When's "Dear Chip" gonna show at a meeting?

TREASURERS RAMBLINGS

I'm really looking forward to this years auction, for a number of reasons. It's about time this club had it's own 8-bit system. Before we put our new logo on a t-shirt, we must purchase that system. (More on our new logo later.) If everything goes as I think it will, just maybe we'll make enough to finally purchase our very own 8-bit system. We also need to bolster the bank account and lastly it would be nice to follow through with the t-shirts, showing our new logo.

Speaking of new logo's, our winning entry was submitted by **Craig Freeman** of S*P*A*C*E. You won't see it in this issue, probably September. Congratulations go out to Craig and to all of you that entered, "Thanx." Craig will be receiving a gift certificate, redeemable at Cave Creek Computers.

As I told you at the last meeting, we're still waiting to hear from the Atari Trek people, as to what our share of the proceeds will be from AT'88. Coupled with a good auction, our bank balance might just zoom back towards the old $1000 mark. Until then, we'll just have to be satisfied with our current balance of $478.62. We've got one thing going for us. There aren't any surprise bills. Sure, I'm shocked by the newsletter bill every once in awhile. What I'm getting at is, we never receive bills, like something you forgot was coming, say on July 12th. Like auto insurance. It usually happens once a year. All of what we create is right in front of us. It's pretty hard to over spend, that's what I'm trying to say! (Geez, spit it out already!)

Bring Bucks, Steve

MEETING MINUTES

Well sorry I have not got the meeting minutes from last month out. I will attempt to do so now. The meeting was very good - we had a demo of Virtuoso a drawing, sound, demo, telecommunications and more. Thanks to Tom Tjarnberg for the demo. Virtuoso is one fine program for the 8-bit world and well worth the price. Check it out!!!!!!

We had a user demo a addressing label program. It was nicely done and donated to the library for club use. I seem to have misplaced my minutes for the meeting so I am doing it from memory.

The July meeting was called to order and the Officers gave their reports. Aug 3rd is the Greenwood Parade and Cave Creek has a slot in it. If anyone has any ideas please call Cave Creek Computers. This was the last meeting before we move to the new location. The Mountlake library will be by City Hall, behind Albertson's.

> The auction will be this month. Bring the stuff you would like to donate. Note: We will work with people who want a percentage of the auction price.

Steve Drake won the drawing and picked Super Bike Challenge. We had demo of a new 8-bit game Starloards and Omar demoed a jigsaw program.

The address labeler program was donated by Mike Marsh. Thanks alot Mike. Remember see ya next month at the new location.

Chuck Betker

LIBRARIANS CORNER
STARBASE 16-bit by Omar Crawford

Well, here it is, summer at last. Beautiful days, lots of sunshine, dawn at 4:00 am dusk at 9:30pm, doesn't leave a whole lot of time to get into the house and play with the computer. So here I am at 2 in the morning trying to get my mind awake enough to write.

Disk sales were not too good in June and without them it gets difficult to make the library self sufficient. Without sales we cannot purchase disks, aquire new programs, or add new disks to the library. SUPPORT YOUR LIBRARY BUY A DISK OR TWO - OR THREE - OR FOUR -, yeah that's it, that's the ticket, BUY FOUR and get one FREE! Counting the 26 disks of tiny art, the library now has a total of 107 disks full of programs, files, tutorials, games, and demos. Member prices on disks are $4.00 each or 5 disks for $16.00 (buy four and get one FREE); non-members pay $5.00 each disk. Remember to bring in your ORIGINAL catalog disk to each meeting and have it up-dated with all the latest that has been added to the library.

Well my crystal ball seems to be a shade on the misty side according to some little gremlins who left a scroll on top of my ST pointing out that I had missed on a couple of predictions, (maybe that was caused by my shaking it??), namely the CAD 3D demos, but I found a lot of other stuff too, and I can only add so much each month. The old ball will be getting a lot of use now (hope it doesn't bother those little critters too much), and the future will be a lot more accurate. For September there will be another ART UTILITIES disk, a MUSIC & SOUND disk, another DEMO disk, a PRODUCTIVITY disk with a graph program, a mail program, another label maker + more, and a GAMES disk, and maybe some other things also. Those of you who have purchased the HINTS DISK #1 --- there is one NEO file on the disk which is no good --- it is fixed now and if you bring in your original disk we will put it on there for you.

What kinds of programs are the most popular? What kind of programs get the most use? What are your needs (in software, folks)? Take a few moments and jot down what you use the most and what you would like to see more of in the library and let me have them at the next few meetings and I will try to tailor the additions to the library to fit those needs and wants.

That's it for now, its getting light outside and I think these little guys would like for me to cover up the crystal ball so they aren't bothered by the light and they can go and find out what coming in the months ahead. See you next month -- Omar.

STARBASE 8-BIT LIBRARY
By Kevin Thrapp

Time marches on and there is never enough time to do the things you should. I had planned to have several things for the July meeting. But due to having to work on my days-off and not having a computer with me while on vacation, you'll just have to wait for the August meeting. (Thanks Rob for covering for me.)

However, the Library now stands at 225 disks with 7 new disks added in July and (hopefully) more for August. I still need input on what to add; Games, Education, Utilites, what do you want?

Officer meetings have been nil for the last few months so I'm not getting the Antic/Analog disks before the meetings, but I'll try to work something out to get them to you.

Lastly I'm going to change the catalog and disks taking out duplicates and bad programs, again any suggestions are welcome. So much so that here is my phone number and address: 533 Elm Way #2, Edmonds WA 98020... 776-2061. Calls should be made between 4 and 8 pm, but there is an answer phone if you need to leave a message before you forget it. See you at the meeting.

STDIO
ATARI ST COMPUTER USERS GROUP

PRESIDENT	Paul Bolme	882-1536
VICE PRESIDENT	Laurie Miller	340-9898
SECRETARY	Jim Adams	488-3536
TREASURER	Craig Reece	789-9129
EDITOR	Joel Check	788-9837
DISK LIBRARIAN	Bill Estes	821-7441
PRINT LIBRARIAN	Laurie Miller	340-9898
PROGRAM CHAIRMAN	Roger Bedell	828-0281
BBS SYSOP	Mike Check	828-0258
MEDIA REP.	Vic Albino	788-2736

Meets: 1st and 3rd Tuesdays of the month at 7:00 PM at Data IO, 10525 Willows Rd., Redmond, WA.
BBS: STDIO, (206) 822-4085, 24hr., 300/1200 baud.
Mail: STDIO, P.O. Box 872, Redmond, WA 98073.
Dues: $15 per year.

Second-Semi-Annual

STDIO Auction
Tuesday, August 16th

Bring your tired, your weary, your lousy. Someone will want it! Make money while you help STDIO! You get 75% of the final selling price! 25% goes to the STDIO general fund.

==========

Bidding will commence precisely at 7:00 PM so if you have things to put on the block, or if you're interested in examining the goods prior to bidding, come at least 30 minutes early!

==========

If you've never been to a computer auction, you probably haven't a clue as to what you're missing! Anything you'd like auctioned (within reason, of course) will be put on the block. There will be

NO MINIMUM BIDS!

so trading is expected to be HOT and HEAVY!

Everyone is invited to participate, so

BE THERE!

T.A.C.E.
TINKER A.C.E. of OKLAHOMA

PRESIDENT		Michael Beard	(405) 793-7978
VICE PRESIDENT		Greg Ray	" 964-3765
SECT'Y/TREASURER		Stephen Moffitt	" 732-8449
EDITOR		Roy Kerr	" 769-3598
LIBRARIANs:	ST	Chris McBride	" 632-6539
	XL/XE	Greg Yelle	" 390-9184
BBS SYSOP		Michael Beard	" 793-7978
PROGRAM DIRECTOR		Rick Spencer	" 755-9563
TECHNICAL ADVISOR		Ron Hamilton	" 387-5649

Meets: 1st Saturday of the month at 1:00 PM (12:30PM setup time) at the Moore Public Library, 225 South Howard.
BBS: TACE BBS, (405) 793-7980, 24hr., 2400 baud, running OASIS software w/35 meg. online storage, ST & 8-Bit downloads.
Mail: TACE, P.O. Box 7697, Moore, OK 73153.
Dues: Full - $20.00, Correspondence - $15.00, BBS only - $5.00.

THE VIEW FROM H.Q.
By Michael Beard

Our annual renewal and election meeting was held on July 2nd. The new Officers are reflected in this months article header. After the elections there were several demos and articles of interest to both the ST and XL/XE users present. The most promising for the XL/XE users was the demo of the new operating system GOE, from Merril Ward and Associates. GOE is an ST-like desktop operating system. It utilizes either a mouse, keyboard or joystick. It features pop-down menus and overlapping windows just like the ST. A demo disk can be purchased from Merril Ward and Assoc. for only $5.00 at the following address:

Merril Ward
255 N. El Cielo Road Suite 222
Palm Springs, CA 92262
Phone: (619) 328-8728

Purchase of the demo disk entitles the owner to an advance copy of the final product, with the $5.00 being applied to the purchase. Included with GOE will be a word processor and drawing program, all mouse driven. Again, even though GOE is written to use a mouse, the programs will work with the keyboard and joystick as well. The first 500 people to purchase the demo disk will receive the final product 30 days before it is released to the general public and retail stores. This is to allow for a final "beta" testing of the product before shipping. Any defective products will be replaced. This is my understanding of the proposals as presented to me by Shelly Merrill, President of Merrill Ward over the telephone. Mr. Ward reserves the right to change or modify in any way the above offer without notice. Personally, I love the GOE demo and cannot wait for the final product! Another program for the XL/XE owners was demo'ed. It was called the Celebrity Cookbook. The cookbook was written using GOE. It is mouse driven but can be used with the keyboard or joystick if you do not have a mouse. The Celebrity Cookbook features favorite recipes of stars like Frank Sinatra, Ronald Reagan, Sophia Loren, Bob Hope, Shirley MacLain, and more! There are 6 volumes. Diet Secrets of the Stars, a Wine Directory, The Bartenders Guide, Perle Mesta's Party Tips, and a quiz to discover How Good a Guest You Are as well as a Personal Recipe Filer are all available! Suggested retail price is $34.99.

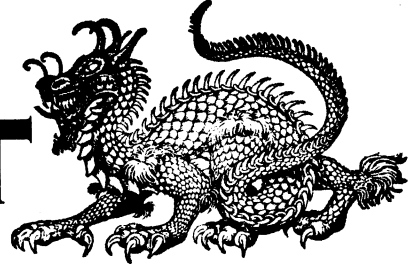
We are looking for a place to meet on the North side of OKC. If anyone has any suggestions please let one of the officers know. This would allow us to have two meetings a month.

We will have more TACE T-shirts for sale at the next meetings. The T-shirts are white with a red TACE logo on the front. They sell for $5.00. Please let one of the officers know as soon as possible to insure that your order will be ready at the next meeting.

I would like to take this time to thanks everyone that voted for me for President. Last year the club purchased the BBS equipment. This year I would like to see the rebuilding of the club's foundation, it's membership. The emphasis will be on getting more members to join and having members whose memberships have expired renew. We will be having a picnic at one of the upcoming meetings. A bowling party and a softball game have also been discussed. Anyone interested please let me know. Thank you again and I hope to be able to live up to your expectations and to the demands of the position.

Michael Beard

TELEPORT
ELECTRONICS



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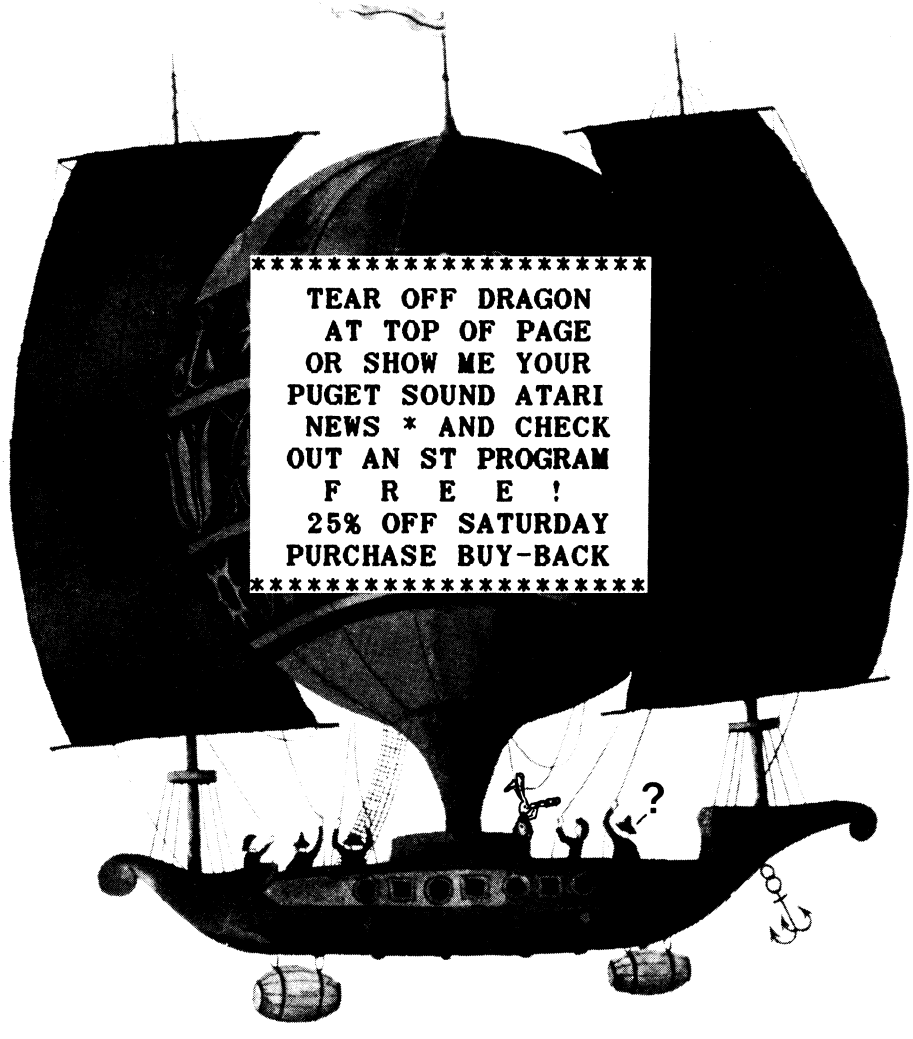
COMPUTERS

STEREO

CAMERA



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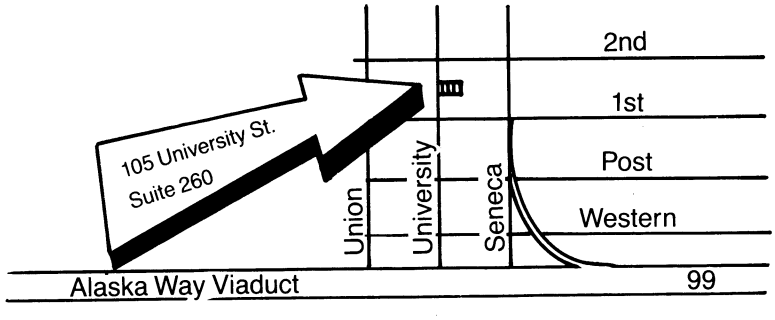

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AUGUST 1988

PSAN Atari Activities

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 TRACE Meeting, 7:30pm Thompson Centre Riverside ANNEX Meeting, 7:45 pm at Cal Sch for the Deaf	2 STDIO Meeting, 7 pm Data IO, Redmond	3	4	5	6 SPACE Main Meeting, 6pm, Highline C.C., Kent T.A.C.E. Meeting, 1 pm, Library, Moore, OK
7	8 TRACE Meeting, 7:30 pm Thompson Centre BRACE Meeting, 7 pm at Lake Hills Library, Bellevue	9	10 SPACE ST SIG Meeting, 6 pm, Butler's KCAce's Meeting, 7 pm at Cent Kitsap JrHi	11 FACCS Meeting, 7 pm at Big Brothers Bingo, Spokane	12 StarBase Meeting, 6 pm Mountlake Terrace Library *"Auction"*	13 SPACE Tacoma Mtg, 10am, SoEnd Neighood Ctr AUGIE Meeting, 3 pm at E. Baseline Libry
14	15 Riverside ANNEX Meeting, 7:45pm, California School For The Deaf	16 STDIO Meeting, 7 pm Data IO, Redmond *"Auction"*	17 PSAN September Input Deadline! *Give a little... Get a lot!*	18	19	20 R-Atari Meeting, 7 pm at Harbor Tower, Oak Harbor
21	22 BRACE Meeting, 7 pm at Lake Hills Library, Bellevue	23	24 SPACE ST SIG Meeting, 6 pm, Butler's, Fed.Way	25	26	27 SPACE Hardware SIG,10am SoEnd Neighood Ctr AUGIE Meeting, 3 pm at E. Baseline Libry
28	29	30	31	1	2	3 T.A.C.E. Meeting, 1 pm at Moore Library, Moore, OK

SEPTEMBER

4 Labor Day	5 TRACE Meeting, 7:30pm Thompson Centre Riverside ANNEX Meeting, 7:45 pm at Cal Sch for the Deaf	6 STDIO Meeting, 7 pm Data IO, Redmond	7	8 FACCS Meeting, 7 pm at Big Brothers Bingo, Spokane	9 StarBase Meeting, 6 pm Mountlake Terrace Library	10 SPACE Main Meeting, 6pm, Highline C.C., Kent AUGIE Meeting, 3 pm at E. Baseline Libry
11 Rosh Hashanan	12 TRACE Meeting, 7:30pm Thompson Centre BRACE Meeting, 7 pm at Lake Hills Library, Bellevue	13	14 SPACE ST SIG Meeting, 6 pm, Butler's KCAce's Meeting, 7pm at Cent Kitsap JrHi	15	16	17 R-Atari Meeting, 7 pm at Harbor Tower, Oak Harbor

Support your users group - *Bring A Friend To The Meetings!*
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